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GAILLARD'S MEDICAL JOURNAL

AND

(*THE AMERICAN MEDICAL WEEKLY.*)

(CONSOLIDATED.)

Scientia et Veritas Sine Timore.

VOL. XL. NEW YORK, JANUARY, 1885. No. 1

# ORIGINAL ARTICLES.

## ARTICLE I.—THE TREATMENT OF PULMONARY PHTHISIS. A Lecture delivered at the Bellevue Hospital Medical College, December 2, 1884. By AUSTIN FLINT, M.D., LL.D. (From the Author.)

The subject of my lecture to-day will be the "Treatment of Pulmonary Phthisis," and as a preliminary to the consideration of this subject I will review briefly some of the facts in relation to the etiology of this disease. The facts to which I refer have important practical bearings.

In the light of recent developments of our knowledge of phthisis, we are to consider it as an infectious disease. Let me define what I mean by the term infectious.

I mean a disease which depends upon a special cause—a specific agent which is capable, under favorable conditions, either within or without the body, of indefinite increase or multiplication.

Phthisis, then, being one of the infectious diseases, has a special cause—a special pathogenic agent, and, if we adopt, as I do, the parasitic doctrine, this pathogenic agent is a micro-organism, a *contagium vivum.* Now, according to the parasitic doctrine, the presence of this specific agent is essential. But the presence of this agent is not alone sufficient. The parasite does not, in itself, suffice for the production of the disease. There are certain auxiliary or co-operative conditions which are necessary, in order that the micro-organisms on which the disease depends shall undergo development, growth, multiplication. These auxiliary conditions are embraced under the names predisposition and diathesis. When we make use of the terms phthisical predisposition and phthisical diathesis, we refer to the auxiliary or co-operative conditions which are just as essential as the presence of the pathogenic agent—the *bacillus tuberculosis.*

Bear in mind the distinction which I made yesterday between diathesis and vulnerability. The latter denotes a general susceptibility to any kind of morbific agency, whereas diathesis involves the conditions which are essential to the production of a particular disease.

Now, the auxiliary conditions which constitute the phthisical predisposition or diathesis are probably just as peculiar to this disease as the special agent, the bacillus tuberculosis; but, in the present state of our knowledge, the nature of these auxiliary conditions is wholly unknown.

And here let me state, parenthetically, that in regard to all matters embraced in our medical studies, it is desirable to have a correct appreciation of the limitations of our knowledge; and, while it is important for us to know everything that is known, it is also important for us to know just how far our present knowledge extends. We are then in a state the most favorable for the acceptance of newly-developed truth.

The auxiliary conditions which constitute the tuberculous predisposition or diathesis undoubtedly may be inherited. They are sometimes congenital when there is no evidence of heredity. These conditions may be acquired after birth by the operation of various unhygienic circumstances, such as confinement within doors, humidity of climate, etc.

I come now to the inquiry, Is there any known specific treatment for pulmonary phthisis? Can we say that, at the present time, there are remedies or therapeutic agencies which are capable of arresting this disease in either one or the other of two ways, namely (1), destroying the parasite by acting as a parasiticide; or (2), removing those conditions which constitute the predisposition or the diathesis?

In the first place, have we any known effective parasiticide? In answer to this question we are obliged to say that the effectiveness of any agent acting directly as a parasiticide is not, as yet, established. Naturally we think first of endeavoring to bring a parasiticide in direct contact with the morbific organism by means of inhalation; and although it is but a short period, a little more than two years, since the discovery of the bacillus tuberculosis, many carefully-conducted experimental observations have been made to endeavor to destroy the parasite by agents contained in the inspired atmosphere. Thus we have reports of experiments made with different agents which are known to destroy certain bacteria, and to destroy indeed the bacillus tuberculosis outside of the body, namely, corrosive sublimate, iodoform, bromine, the salicylates, carbolic acid, creosote, peroxide of iron and quinine. Thus far experimentations for this object have been fruitless.

It is evident that there are obstacles, perhaps insurmountable, in the way of accomplishing this object, that is, the destruction of the parasite by means of inhalations. One of these obstacles is the difficulty of bringing toxical agents into direct contact with the parasite atoms, and another of bringing enough of a toxical agent in contact with the parasites to destroy them without injury to the patient. We can appreciate these obstacles, but we should by no means be justified in saying that they cannot be overcome. At the present time, however, anyone who may claim to be able to employ effective parasiticidal inhalations in this disease either exhibits a want of knowledge of the subject or an unwarrantable assumption.

May we not hope to accomplish the object by the introduction of parasiticides into the alimentary canal, that is, administered by the mouth? Here, too, is an obvious difficulty, for if we employ a remedy for its parasiticidal effect, it is necessary to administer it in sufficient quantity to be taken into the blood and there exert a toxical effect without injury or destruction to the patient.

It would be unreasonable to say that this is impossible, for in syphilis parasiticides are thus introduced, and we are thereby enabled to destroy the parasites which, as we may suppose, constitute the morbific agent in this disease. The same is true of the disease called malaria. It is therefore extremely desirable that experimental observations be continued, always observing proper precautions for the welfare of the patient. And we are to bear in mind a fact which our knowledge enables us to appreciate, namely, that because one tried remedy will destroy a particular parasite, it does not follow that the same remedy will destroy other parasites. Quinine, which is so effective in the treatment of malarial disease, has no effect whatever in relapsing fever. Hence, we have to seek in each one of the diseases caused by micro-organisms, the particular remedy necessary to destroy the particular parasite which causes that disease.

There is room for the question whether some progress has not already been made in the discovery of remedies which exert a certain amount of control, or, in other words, have a curative effect upon phthisis, by an action either exerted directly upon the parasite or by removing the predisposing or diathetic conditions on which the parasite depends for its existence. One of these remedies is arsenic. I do not think we are in a condition to declare positively as to its efficacy in one or the other of the modes just stated, but there is reason to believe that it has some influence. I have prescribed this remedy in a great many cases of phthisis, but I am not prepared to give a decided opinion. Further observations are desirable.

I will state here a practical point in regard to the administration of this remedy, namely, to give it in small or moderate doses, and *not* progressively to increase the dose. My belief is that it is customary for physicians to increase pretty rapidly the doses until they notice its characteristic effects, œdema under the eyes, etc., and that in pursuing this course, owing to the toxic effects upon the patient, it becomes necessary to discontinue the remedy before its remedial effect is obtained.

It has been claimed that the hypophosphites have a special curative influence in cases of phthisis. If so, this influence must be exerted in one or the other of the two modes just stated. I can say that the hypophosphites seem to be useful in some cases, but I am not convinced of any special influence over the disease. I must add that the statements of the writer whose name is associated with the use of this remedy in phthisis (Churchill) cannot be taken as trustworthy.

Another remedy concerning which it is a question as to a curative influence is alcohol. Many years ago I was led by clinical observations to think that in some way alcohol antagonizes tuberculous disease. In 1863 I read a paper at a meeting of the New York Academy of Medicine, entitled "The Management of Pulmonary Tuberculosis with special reference to the Employment of Alcoholic Stimulants." This paper was published in the Transactions of the Academy for 1863. I submitted therein the results of the analysis of thirty-five cases of phthisis in which the disease became non-progressive, and in which remedial measures, including alcoholics, may be supposed to have had a curative influence. Of those thirty-five cases, in fourteen the curative treatment consisted exclusively in the use of alcoholics. Abstracts of each of the cases were contained in a supplement to the paper. Of the fourteen cases, in nine the recovery was apparently complete, the patients being well when their condition was last ascertained; and the time that had elapsed in the cases, respectively, was as follows: Eleven years, six years, five years (two cases), three years, fourteen months, one year (two cases) and four months. In five cases the arrest of the progress of the disease was not followed by complete recovery, and in these cases, respectively, the disease was known to have remained non-progressive as follows: Seven years, two years (two cases), ten months (two cases).

It is proper to add, that in the fourteen cases hygienic influences were brought to bear upon their management, including among these changes of climate. How much importance is to be attached to these influences it is impossible to say. Moreover, there is the factor—an unknown quantity—self-limitation to be taken into account.

In two of the cases the apparent influence of alcohol was so marked that I will read the histories:

In the first of these two cases, the patient, a clerk, aged 42, had hæmoptysis, not preceded by cough, in January, 1857. Slight cough and expectoration followed, and shortly before my examination in the following May he had repeated recurrences of the hæmoptysis. The physical signs showed a moderate deposit of tubercle at the summit of the right lung. Cod-liver oil and alcoholic stimulants were prescribed, but he was unable to take the oil, owing to its offending the stomach. In addition, he was obliged to take more exercise in the open air than he had been accustomed to, and to live generously. He remained quite feeble for several weeks, and then began to improve; his cough and expectoration after about three months had entirely ceased, and at the end of four months he had gained in weight thirty pounds. In the meantime his allowance of whiskey had been a pint daily. At the end of four months he reduced the quantity of whiskey considerably, which he was able to do without difficulty, so far as regards any desire for it. He then had a slight recurrence of the hæmoptysis, and the whiskey was increased for a time. This patient has remained perfectly well up to this time (six years from the date of my examination), and is a perfectly temperate man.

The apparent curative influence of the whiskey in this case is the more striking from the fact that, although the patient increased the amount of exercise in the open air, he did not change his habits in this respect very materially. He resumed in a short time his duties as an indoor clerk, and has continued in this occupation ever since.

In the other case, the patient is the daughter of a medical friend. In February, 1858, the physical signs showed an abundant deposit at the left summit of the chest. She had had repeated recurrences of hæmoptysis, with cough and expectoration, and was considerably reduced in weight and strength. When she began to take the whiskey, as her father has informed me, the pulse was 130 or more; she had hectic paroxysms, followed by profuse sweating, and the expectoration was large. He began by giving half an ounce of whiskey hourly, and this, with a little morphia, constituted the sole remedial treatment. At the end of two weeks there was some improvement, and the whiskey was increased. At the end of two months she was taking a pint of whiskey daily, and this she continued to do steadily for two years. At the end of this period she had regained her usual strength and weight when in health, and the menses returned, having been suppressed for three years. The whiskey then, for the first time, began to occasion excitement; it was gradually reduced, and at length discontinued. She was unable to go out of doors for four months after beginning to take the whiskey. After this she was kept in the open air most of the time. At the end of a year she was accustomed to walk two miles every morning. She has been apparently well for the past year.

This is the most remarkable of the cases of arrested tuberculosis which have come under my observation. The circumstances were certainly extremely adverse to any expectation of recovery. The patient's condition, as regards strength, was such that the influence of out-door exercise could not be brought to bear until a certain amount of improvement had taken place. The alcoholic remedy was given largely, and, in short, so far as a judgment can be based on the history of a single case, the curative effect of the remedy was strikingly manifested.

At the time when the paper containing these cases was written, I was not a little enthusiastic in my belief that phthisis may, in some cases, be controlled by the use of alcohol. Its use is not well tolerated by all patients. This I had learned by experience, as I stated in the paper. I confess that after that time my enthusiasm abated, but I am not sure that there was any good reason therefor. May not alcohol act either directly as a parasiticide, or, indirectly, by sterilizing the soil on which the existence of the parasite depends? If so, it may be necessary to give it pretty largely in order to secure its full curative effect. It is to be borne in mind that phthisis is one of the diseases in which there is sometimes a greatly-increased tolerance of alcohol.

I waive any consideration, at this time, of the bearing of the use of alcohol, as a remedy, upon the question of temperance, only adding that, so far as my experience has gone, its use as a remedy in phthisis has never, to my knowledge, led to intemperate habits. On the other hand, patients are quite willing to relinquish its use when to continue it is considered no longer advisable.

I have not time to consider the circumstances which are to determine the choice of alcoholics: whether in the form of wine, malt liquor or spirits, or the varieties of these three forms. In each the therapeutic agent is the alcohol. The quantity to be given and various rules of administration must vary according to the circumstances in individual cases. I will conclude this branch of the treatment by saying that if alcohol be of therapeutic value in cases of phthisis, especially when given largely, it must be so in some other way than by its action as a supporting agent; and there seems no other way to account for its usefulness than to consider it as a parasiticide, either directly or indirectly, by its effects on the diathetic conditions.

The parasitic doctrine of phthisis in no measure inviolates the lessons already obtained, and which remain to be obtained, from clinical experience. In general terms, experience teaches that everything which invigorates and strengthens the system affects favorably the disease, and *vice versa.* In other words, the diathetic conditions are either incidental to, or increased by, constitutional debility. This is loose language, I admit, but we cannot use language more explicit so long as we are ignorant of the nature of the tuberculous predisposition or diathesis. The inquiry then arises, What are the known means of producing a favorable effect on the diathesis, in other words, diminishing or removing it?

*First,* in answer to this inquiry, out-of-door life. There can be no question that living in the open air is conducive to the arrest of pulmonary phthisis. To secure this, patients may be obliged to change their occupations, when these involve living within doors, and especially in illy-ventilated, overcrowded rooms.

*Second,* change of climate. The subject of climate in relation to phthisis offers a large field for remark and discussion. In the portion of my hour today which remains I can only notice some practical points.

The infrequency of cases of phthisis in certain situations is made a ground for recommending these as desirable for phthisical patients. But it is to be considered that in a situation, the inhabitants of which are not very many and are hardy, phthisis is not a disease of frequent occurrence until it becomes, as it were, domesticated. As an example, in 1836 I became a practitioner of medicine in Buffalo, at that time a city of about 18,000 inhabitants, mostly young persons from all parts of the world, and a large proportion from New England. It may be said that the city then had a picked population as regards health and vigor. For several years phthisis was a rare disease. But after twenty years, when the city had increased to 150,000 inhabitants, phthisis had become a frequent disease. Phthisis was infrequent so long as the bulk of the population were vigorous, and there was comparatively little exposure to the bacilli; but the disease became frequent when the added population embraced immigrants with a tuberculous predisposition, and the foci for the diffusion of bacilli had multiplied.

Every place which becomes celebrated as a place of resort for phthisical patients must, sooner or later, lose its *prestige,* for the reason that to such a place many are attracted who would fail to derive benefit from any climate. The number of such cases, after a time, brings a particular place into disrepute. The larger the number of patients who are attracted to it, the sooner it ceases to be considered as a desirable place of resort. The past history of health resorts in this country and in other countries corroborates these statements.

Does experience show that for patients residing in the Northern States of the Union a temporary change of climate, as a rule, is beneficial? This question I endeavored to answer in preparing my work on "Phthisis in a Series of Clinical studies." These studies embraced the results of the analysis of over six hundred and seventy recorded cases of phthisis (published in 1875).

Of these cases 74 were analyzed with reference to the influence of a temporary change of climate without regard to the particular climate resorted to, the stage of the disease or other circumstances. I quote the results and conclusions as follows: "In 9 of these 74 cases the disease ended in recovery; 13 are on the list of cases of arrested or non-progressive phthisis; 33 are on the list of fatal cases; 5 are on the list of cases in which the disease progressed slowly, and in 14 neither the duration nor the termination of the disease appears in the histories. It is fair to conclude that the change of climate was more or less useful in all but the fatal cases and those of uncertain duration and termination; that is, in 27 of the 74 cases, of the 33 fatal cases, in 23 the histories appear to show more or less benefit from the changes of climate; in one case the disease did not progress; in one it progressed slowly, and in 8 cases there was apparently no benefit. Of the 14 cases of uncertain duration or termination, in 6 the histories appear to show benefit; in 5 the disease did not make progress, and in 3 there was apparently no benefit. Thus, of the 74 cases there was apparently more or less benefit from the change of climate in 56, and in only 11 does it appear that there was no benefit, the disease either making no progress or progressing slowly in the remaining 7 cases."

The foregoing analysis had reference to a variety of climates. Of the 74 cases, in 17 it was simply noted that the patients traveled in Europe, and in 6 cases that the patients went from the northern to the southern portion of our country. Exclusive of these cases, the climatic changes were varied, the situations which were resorted to amounting in number to 27, as follows: Nice, Algiers, Minnesota, Mentone, Cuba, California, New Orleans, the Adirondacks, Savannah, Virginia, Nassau, Egypt, Lima, Rio Janeiro, West Indies, Vermont, Augusta, Ga., Kentucky, South Carolina, New Hampshire, Michigan, Washington, Philadelphia, Florida, Iowa, North Carolina and New Mexico.

I endeavored to study the cases with reference to the relative advantages of these different climates, but I reached no satisfactory conclusions. It is true that the cases representing different climates were too few to furnish adequate statistical data for a comparison in that point of view. Since, however, in several of the climates represented, there were cases of arrest of the disease, or cases in which the disease progressed slowly, if at all, it would seem to be a fair inference that the favorable influence pertains to the change rather than to the particular climate chosen. And if this inference be correct, it follows that the agencies by which a favorable influence is exerted relate to accessory or incidental circumstances more than to purely climatic conditions.

It would save not a little trouble of reflection and sometimes perplexity to fix upon a particular situation to which all phthisical patients are advised to resort, or even to select a few of the many which are recommended as places of resort for such patients. Some physicians seem to be prepared at once to advise where phthisical patients should go. I find, however, this part of the treatment to be not always easy to decide upon, and to require the consideration of various circumstances proper to individual cases.

To assume that any particular climate exerts a specific influence upon pulmonary phthisis is absurd. There can be no such influence pertaining to any climate. Certain climates are better than other climates undoubtedly, but a climate which, as experience shows, is adapted to one case, is not necessarily equally adapted to other cases. A change of climate must often be made experimentally, and not infrequently the trial of different climates is advisable, in order to ascertain the climate which, in a particular case, has the most favorable influence.

As a rule, the desirable qualities in a climate suited to phthisical cases are, dryness, purity, uniformity and a low density. But a climate which includes all these qualities is not the best for every patient. Some patients do better in a moist than in a dry climate, and some persons with phthisis, or in health, are affected unpleasantly by a high altitude.

Not a small share of the benefit derived from a change of climate is due to accessory or incidental circumstances, such as the ability to live in the open air, freedom from the care and anxiety of business affairs, etc. On the other hand, there are certain accessory or incidental circumstances which are unfavorable such as the mental depression arising from absence from home and friends, the want of occupation and resources for enjoyment. In selecting a place of resort, the accessory or incidental circumstances are to be considered not less than the character of the climate. And, in giving due consideration to these, the habits, the pursuits and the peculiarities of the mental constitution of the patient must be taken into account; hence it is, that to decide upon a particular place of resort for phthisical patients requires reflection, and each case should be considered with reference to its peculiarities. As a rule, patients should not be exposed to the moral effects of being surrounded by other patients exhibiting the disease in all its phases. In this point of view, sanitaria for phthisical patients are not to be recommended.

I have seen remarkable benefit from long sea voyages; and if patients have had some experience of sea life, if they are fond of it, and it be practicable to resort to this measure, I do not hesitate to recommend it.

If a patient has found the progress of the phthisical affection to cease on making a change of climate, it is wise not to make the change a permanent one. The importance of this should be enjoined.

I must not pass by an important practical rule in relation to a change of climate which involves separation at a distance from home and friends. It is, never to sanction such a change if the pulmonary symptoms, the physical signs, and more especially the general condition, as regards feebleness, pyrexia and anorexia, denote an actively-progressing affection. The only exception to this rule are the instances in which the patient longs for a change, and when, in the opinion of friends, the probability of dying away from home should be risked in order to satisfy that longing.

In concluding my remarks on the climatic treatment of phthisis, let me again remind you that we are always to consider the factor, of unknown quantity, self-limitation, when we endeavor to estimate the apparent influence of climate, as well as of other measures. I have lately called your attention to a case of phthisis in Bellevue Hospital, in which the disease has existed for eight years, and the general condition of the patient is fair, although he furnishes the physical signs denoting a large cavity. Not a year passes but I am able to show hospital cases in which this disease ceases to progress, patients not infrequently improving so much that they feel able to leave the hospital and resume their accustomed avocations. Now, were I to make a collection of these cases and publish a report of them, it might be made to appear that Bellevue Hospital has claims to be regarded as an excellent sanitarium for phthisical patients!

As my hour has expired, I must defer the consideration of the hygienic treatment of phthisis as regards food, clothing, exercise, etc., together with the palliative treatment of cough, impaired appetite and digestion, perspirations, diarrhœa, etc., until my next didactic lecture. I must also defer some remarks on the prevention of phthisis, especially with reference to the communicability of the disease, a fact which we must now consider as established.

## ARTICLE II.—BILIARY CALCULI. By W. H. TAYLOR, M.D., Washington.

Inspissated bile, biliary concretions, biliary calculi or gall-stones, by most writers on diseases of the liver, are classed together and spoken of as constituting one and the same pathological condition. George Harley is the only one, so far as I have discovered from looking up the subject, who draws particular attention to the clinical and pathological distinctions between a thickened or inspissated condition of the bile, or still further a concretion of such bile forming a solid mass, and true gall-stone deposit or calculous formation. In the early writings in particular, it is often difficult to determine whether obstructions in the gall-ducts spoken of are from gall-stones or thickened bile. According to the researches of Dr. Thudichum, a Greek physician named Alexander was the first writer on the liver to make mention of gall-stones, but it does not appear very clear from the translation that he referred to gall-stones when speaking of obstructions in the liver, though it is quite probable, as Thudichum says, that he was well aware of such formations.

Alexander wrote about A.D. 360 or 370, and his observations in regard to gall-stones were made on the ox or sheep. The first to mention gall-stones in the human subject, according to the same authority, was a celebrated Florentine physician named Benevieni, whose work was published about the year 1507, and a second edition of the same in 1528. Then next come letters of Andreas Vesalius, 1547.

Fernelius, physician to the King of France, who wrote a work on general diseases in the year 1558, was the first, says Thudichum, to give an account of the natural passage of gall-stones. Fallopius wrote about gall-stones in 1562. Realdus Columbus published a work treating of gall-stones about 1559: there is a Paris edition of it dated 1572. Marcellus Donatus (I still quote Thudichum) gives the first systematic data referring to gall-stones in 1586. Horst's edition of this work was in 1613. Donatus in this work refers to the writings of Kentman, Benivienius and Dodonœus.

Scheuckius wrote in 1609 on calculi of the liver and gall-bladder. He reports the statement of Turneiserus, that a green calculus the size of a walnut was found on the gall-bladder of the Markgraff, John of Brandenburg; he also quotes Forest as stating that a hundred calculi of the size of the seeds of pomegranate or Indian corn were taken out of the gall-bladder of Henry, Duke of Brunswick, and another case observed by Joan Fridius, of Count Philip of

Hanau, in whose gall-bladder upwards of 1,000 calculi were found. The work of Coe, published in London in 1757, entitled a "Treatise on Biliary Concretions," was the first monograph on gall-stones in which a combination of the anatomical, physical and clinical knowledge up to that date was attempted.

Durand, a French physician, whose treatment in gall-stone colic is referred to at some length both by Thudichum and Franconneau Dufresne, wrote his "observations" in the year 1790, since which time many things and much have been written about biliary calculi and concretions in the gall-bladder, hepatic ducts and liver.

An attack of biliary colic, or an attack of gall-stones, as it is sometimes called, may come on without any premonitory symptoms whatever, as in the following case which came under my observation some years ago:

*Case* 1.—W. H. B., a stout, healthy man, about forty years of age, of very temperate habits in regard to stimulants, but a heavy eater, and leading a sedenary life, was taken an hour or so after breakfast in the morning with a paroxysm of intense pain in the epigastric region. It happened that I saw him just at the commencement of the attack. He was pale and distressed looking; his respiration was slightly accelerated; pulse slow; temperature normal to the touch, but he seemed to have a slight chill or nervous rigor. The subjective symptoms were violent pain at the ensiform cartilage, spreading back through the chest towards the spine, and a feeling of constriction around the chest. The pain was relieved by an opiate and warm applications to the epigastrium; it returned again in the evening, but was not so violent as in the morning, probably owing to the opiate, etc. The next day there were two paroxysms of pain of greater violence than on the first day. After this the paroxysms were not so distressing, but continued up to the fourth day of the attack, when a small biliary calculus was found in the feces. Further than slight soreness in the epigastric region, which passed off in a few days, there was no more trouble in this case. The calculus was evidently solitary. There was no jaundice, and stools were of natural color.

Biliary colic is not uncommon in individuals suffering from chronic disease or confirmed invalidism, though it is not evident that such condition is the cause of the attack, only indirectly to the extent to which it interferes with proper exercise. The following case may be one belonging to this class.

*Case* 2.—A lady, aged fifty, of what used to be called the atrabilious temperament, came under my care, with a history of several years' ill health, caused, or supposed to be caused, by some uterine disease, the nature of which I did not particularly inquire into, as it did not give rise to any symptoms at this time. She was taken with a pain a little to the right of the median line, just under the border of the ribs. The pain was not of such a severe character as is usually complained of in cases of biliary colic, but it was sufficient, together with the other attendant symptoms of anorexia, nausea, vomiting, etc., to confine her to bed for several days. There was slight jaundice, but no calculus was found. I do not think it was searched for with any care. Probably in this case the colic may have been due to obstruction from catarrh of the duodenum and common duct, together with an inspissated condition of the bile.

Sometimes there may be symptoms for a longer or shorter time, which may or may not be referred to some disorder of the liver, and still the existence of gall stones not be suspected, or, if suspected, not clearly enough indicated to make a diagnosis of gall stones until some circumstance gives rise to an attack of colic, as in the following:

*Case* 3.—W. F. H., a young man, about 28 years of age, that I have attended a number of times during the past eighteen months for violent and troublesome attacks of urticaria, is a man of very good habits, and leads an active life, but is said to be very fond of eating, and to indulge in an appetite for rich food. In addition to the nettle rash, he has had several attacks of stomach and bowel disorder, supposed to be caused by indigestion and so treated. With these exceptions, his health has been quite good. After the first attack of urticaria, spots of discoloration began to appear on his chest, and finally spread to the abdomen. Now the blotches are quite large, some of them three or four inches across, and of irregular outline, and covering most of the chest and abdomen. The pigmentation is not deep, the color being about the shade of an ordinary freckle.

October 21st of this present year he came home from a journey of fifteen hundred miles, which he made in the cars without stopping, the usual delays at stations excepted. The next day was a busy day with him at his desk, and returning home late in the evening he was taken with pain in a spot just under the ribs, about two and a half inches to the right of the median line, covering a space not larger than a silver dollar. He described the pain as so sudden in its onset, and so intense, as to deprive him for some seconds of both breath and motion. He leaned against a fence, or he should have fallen to the ground. When he was able to draw his breath, he yelled with agony; he was fortunately within a few steps of home and managed to get there, and I saw him a few minutes after. I found him lying on his bed partly divested of his clothing, and afraid to move or speak for fear of bringing on a paroxysm of pain such as he experienced in the street. He said he still had considerable pain, but nothing like it was at first. His pulse was slower than normal; his respiration slightly accelerated; temperature, judged by the touch, natural, though on being questioned he said he felt a little chilly. I examined his abdomen and chest carefully, there was no swelling or pain or tenderness upon pressure anywhere except at the circumscribed spot mentioned as the seat of pain. There firm pressure increased the pain. When asked to describe the character of the pain when he was first taken with it, he said he hardly knew how to describe the sensation, the agony was so terrible, it was different from anything he had ever before experienced, that it felt as though it were going to take away his breath and kill him at once; that he did not think any one could endure such intense suffering and survive many minutes. The pain, as he said, started two or three inches from the surface and struck outwards towards the surface, and forwards towards the middle line of the body. In answer to the question, he said the pain never passed back in the direction of the spine. I gave a hypodermic of 1-16 gr. sulph. morphiæ, and he was taken with a spasm of pain and yelled out just as I gave it, but soon became quiet and got to sleep and had a very good night, until between five and six o'clock in the morning, when there was another attack of pain. After this there was no pain of any severity until between four and five in the afternoon, when there was a paroxysm. This attack was followed by nausea and vomiting.

The next attack of severe pain occurred late in the evening of the next day (24th), that is, on the third day. On the 25th and 26th he was attending to his business, but looked weak and pale, and said he felt sore at a spot a little more in front, towards the pit of the stomach. On the second day of the attack he remained quietly in bed, and I took the temperature and rate of pulse and respiration, which were as follows: Respiration 26, pulse 64, temperature 98, morning; respiration 20, pulse 60, temperature 98.2, evening. After the third day the pulse came up to 70 per minute, and the respiration remained more rapid than normal, the temperature continuing normal. Itching all over was comblained of, but there was no eruption. Appetite remained good throughout the attack, and the evacuations from the bowels were of natural color, and there was no jaundice. After washing the feces, a black deposit, like coarse gunpowder, remained in the vessel; no calculus was found until the 28th, which was the 7th day of attack, then a small black, or dark-brown calculus was found. I think more were passed but escaped notice, as the examinations were not carefully made.

The etiology of the condition that is attended with the formation of biliary calculi is not definitely known. It is probable that, apart from modes of life and articles of diet, there is a predisposition, either hereditary or acquired, that leads to the formation of these deposits.

George Harley, in his work entitled "A Treatise on Diseases of the Liver with and without Jaundice," says the formation of gall-stone is probably due to some derangement in the gall-secreting apparatus which allows the gall acids to enter the general circulation. Goodeve, in an article on gall-stones, Reynold's system, I suppose, means pretty much the same thing when he says the cause may be local, leading to chemical changes in the constituents of the bile. Harley accounts for the itching of the skin all over the body, by the supposition that the bile acids entering the general circulation irritate the nerve terminations in the skin. I should think this itching was merely one of the instances of peripheral nerve irritation produced by injury to an important organ; such, for instance, as the itchings and various irritations we see at distant parts from disease of the uterus. I recollect seeing a boy who suffered with a burning sensation in the feet that gave him such torment that he was admitted to the hospital for treatment. He had just a short time recovered from an attack of malarial fever, and had considerable enlargement of the right lobe of the liver. He was put upon treatment to relieve the congestion of the liver, and as that improved in a day or two, the burning in the feet left him. As gall-stones are composed for the most part of cholesterine—that is, excepting some rare specimens—in combination with alkaline and earthy matters and coloring matter, it was by some supposed that excess of cholesterine in the bile was the main cause of their formation, and in support of this theory attention was called to the fact that gall-stones were most common in middle or advanced life, when cholesterine was found in larger proportion in the bile; but Thudichum's observations show that the period of life which gives the most cases of gall-stones is prior to the period when cholesterine is in excess; and Budd, I believe, has demonstrated pretty clearly that excess of cholesterine in the bile will not of itself cause the formation of a calculus, unless there is something else present as a nucleus around which the cholesterine can deposite or crystalize.

Age, sex, and a sedentary life are named as predisposing causes. Women are more prone to suffer from biliary calculi than men, on account of their leading a less active life than men. Climate is said to be one of the determining causes of biliary calculi, the disease being common in cold climates but rare in hot climates. Harley says climate has not so much influence in the production of gall-stones as the mode of life; that in Russia he found gall-stone disease very common, while in Norway, where the climate was much the same, the disease was very rare; this he accounts for by difference in diet, the Russians consume large quantities of fat and fat-producing food, while the Norwegians live mostly on a fish and vegetable diet. I think I have seen it stated that urinary and biliary calculi are rare in Iceland, and fish, I believe, enters largely into the bill of fare in that country. In regard to the time of life at which individuals predisposed to the gall-stone disease are most likely to suffer, I will give Harley's table, which he says he has made up from a comparison of European writers:

In 1,000 cases 750 occur over 40 years of age; 200 occur between 30 and 40 years of age; 40 occur between 20 and 30 years of age; and only 10 occur under 20 years of age.

I do not think there is any doubt that the constitutional defect predisposing to the formation of biliary calculi is hereditary, just as the predispositions to gouty and tuberculous deposits and cancerous diseases are hereditary. Gall-stones are often found in individuals suffering from these diseases, but it is not thought that they bear the relation to one another of cause and effect.

In cancer of the liver, calculi are sometimes found in the gall bladder, but not more constantly than when the disease affects some other part of the body. I do not think that any constant pathological change takes place in the liver consequent upon the formation of biliary calculi, other than that incident to the mechanical irritation due to the presence of a body that has become a foreign body, or to the calculus or concretion plugging up a duct. The complete occlusion of one or more of the hepatic ducts by calculi might cause atrophy, or possibly abcess in that part of the liver, but such a condition must be rarely associated with the pathology of gall-stones, as the natural tendency would be for such calculi to pass on from the smaller to the larger ducts, and thus eventually into the duodenum. Occasionally the cystic duct has been found obliterated by inflammatory adhesions caused by the impaction of a calculus and the gall bladder greatly distended with mucus, the bile which it may have contained at the time of the impaction having been absorbed. In connection with the pathology of biliary calculi, some interesting cases are reported where they have escaped from the gall bladder by ulceration and passed from the body through various natural outlets and fistulous openings, some getting into the stomach and being expelled by vomiting; some into small or large intestines and passing with the stools; others have ulcerated into the bladder, and one or two cases are reported where calculi have found their way into one or other of the ureters, and passed down into the bladder and been expelled with the urine; one case is reported where a biliary calculus ulcerated into the uterus and passed out by way of the vagina; several cases are on record where calculi have either passed or been extracted through fistulous openings in the walls of the abdomen.

Harley says the number of calculi that may be formed in the body is almost unlimited. Morgagni mentions finding 3,645, and Otto, 7,802 in a gall bladder. In searching the feces for calculi it is well to remember that according to form and color there are many varieties, and that all particles not readily dissolved in water should be carefully examined. Some calculi are as white as snow, some black, and there is almost every shade and color between these extremes. Harley mentions a very rare variety of calculus, which, I think, he calls the atheromatous or steatomatous variety; they are very soft, can be broken up between finger and thumb, and look like lemon seed. In Russia calculi are most commonly very light-colored, and some specimens are quite large; they are composed almost entirely of cholestrine, with some fat acid compounds. This variety being so common in that country is attributed by Harley to the large quantities of fat consumed by the people.

The dark-brown or black calculus, such as was found in my case 3, is a variety mentioned by Thudichum as often found. They are not generally solitary, and may be accompanied with more or less biliary sand or gravel, which is nothing more than small calculi. The composition of these calculi is, according to Thudichum, altered cholochrome with carbonate and phosphate of lime.

There is a very singular intestinal concretion mentioned by Harley, which he says has been mistaken for a biliary calculus or concretion; it is round, smooth, dark-colored, and of low specific gravity, floating on water like cork, and is composed of oat hairs stuck together with mucus and other matter found in the bowel. Liston had twenty of these calculi, so called, that were about an inch in diameter, and were passed by an individual that lived almost exclusively on oatmeal.

Frerichs, in his "Clinical Treatise on Diseases of the Liver," says he has in his collection 1,950 pearl-like glistening gall-stones, all of the same size, taken from the gall bladder of a case at Breslau. The same writer says that the characteristics of calculi in a case are almost invariably the same; that out of 630 cases, only 28 dissimilar were found. In the collection at Göttingen there is a gall-stone weighing four ounces that was taken from an abcess in the liver consequent upon perforating ulcer of the stomach, the nucleus of which was found by Frerichs and Fuchs to be a plum stone.

According to Frerichs cholesterine is the principal substance in the construction of biliary calculi; this occupies the same position in the gall-stone formation that uric acid does in the urinary calculus, and is found either in the crystalline or amorphous state, the latter formation being rare. Bile pigments are found in various proportions except in the pure white formation. Choleypyrrhin, a yellowish-red substance, either pure or with lime, may form the nuclei, or more often the shell. Cholechlorin, a green pigment, is sparingly found. Altered bile pigments, and biliary and calcareous salts in small quantities. Glycocholate of lime, stained dark, forms the dark rough calculus. Fatty acids are rarely found in large quantities, but compounds of the fatty acids, forming margarates, and stearates, and saponaceous compounds are very common. Frerichs divides calculi into the simple homogeneous calculus, without shell or nucleus, a very rare variety, and the compound calculi which are formed with crystalline regularity, and are either striated or laminated and have nuclei.

The external crust of calculi in the majority of cases is composed—

1. Of cholesterine, white or yellowish-white in color.
2. Of choleypyrrhin and lime of a reddish-brown or blackish color.
3. Of a thick crust of carbonate of lime, which may be brown or white and smooth or worty.

The symptoms of biliary colic, or an attack of gall-stones, are pain, jaundice, absence of bile in the feces, and lastly, finding a gall-stone in the evacuation. These symptoms are not all present in the majority of cases, for many instances are recorded where gall-stones have passed without giving pain, and jaundice and light stools are symptoms not present in half the cases; and as to finding the calculus, it is not such an easy matter to do that, unless the evacuations are carefully examined for a considerable time after an attack. Still, it is not such a difficult matter to make a diagnosis in a case of biliary colic to any one that has ever seen a case; the location and character of the pain and general appearance of the patient is very distinctive. The condition most likely to be mistaken for, or confounded with, biliary colic is renal colic, or the passage of a calculus down the ureters; as an instance, I will relate the case of a young man that came to me some time since with a history of repeated attacks of colic which had been attributed to the passage of gall-stones, and a small pill box of gall-stones, so considered, in his pocket. I was not satisfied, from the description of the attacks, that they were caused by gall-stones, and I thought the so-called gall-stones were seeds of some kind, so I had them examined under the microscope, and the report of the microscopist was, that the specimens were some kind of seed. Shortly after this I had the opportunity of seeing this patient during an attack, and from the fact of the pain starting from the right of the spine and running down to the groin I diagnosed renal colic. About this time also the young man discovered any quantity of the supposed calculi in a jar of blackberry jam, of which he had eaten very freely during the time he had been finding these substances in his stools. I directed treatment with a view to correcting the condition of urine favorable to the formation of calculi, and there were no more attacks of colic. This young man had consulted some of the first professional men of this city and New York.

Harley says that in biliary colic the pain never starts in the back, but in renal colic it always does. Budd says there is always a sense of constriction around the base of the chest in gall-stone colic. In cases of jaundice where it is not clear whether the jaundice is caused by suppression or obstruction, Harley considers that finding the bile acids in the urine decides the question in favor of jaundice from obstruction; but Frerichs and Stadler are not of this opinion, as they maintain that the bile acids are decomposed in the blood, and consequently not eliminated by the kidneys. Kuhn is quoted by Harley as stating that by Hopper's test he never fails to find bile acids in the urine in cases of jaundice. I think that Harley's explanation, that Frerichs must have made his examinations in cases of jaundice from suppression, where in consequence of the liver not acting no bile acids were formed, and consequently could not be eliminated, accounts for the different results of the examinations.

In the treatment of the cases that I have here mentioned the pain seemed to be easily controlled by opium. The first two cases took opium by the mouth; the last case (3) I gave morphia hypodermically, once only, and on the third day gave small doses of opium extract with belladonna extract; and after the passage of the calculus I gave bicarbonate of soda in a bitter infusion.

Some years ago Durand, a French physician, brought into quite extensive use a mixture of turpentine and sulphuric ether, which is still spoken of as "Durand's remedy," and is recommended in certain cases by Franconneau Dufresne in his work on diseases of the liver, but he says it should be given with caution.

A preparation called terebinthinated ether has been used by Dr. L. M. Taylor, of this city, quite extensively, and, he says, has given very satisfactory results, especially in cases of obstruction from inspissated bile.

The treatment most in favor with writers of the present time, both as a preventive treatment and to facilitate the expulsion of calculi already formed is the alkaline treatment, and the best alkaline, preparation is the bicarbonate of soda given in doses of from ten to thirty grains, two or three times a day, in combination with tonics or other medicines that may be indicated in the individual case. Budd and Harley both recommend half a drachm of bicarbonate of soda in a glass of hot water, frequently repeated, as the best remedy in cases of obstinate vomiting, which sometimes occurs in this disease. Dr. Kearney, who has practiced in the yellow-fever districts of the Southwest, informs me that half a grain to a grain of bicarbonate of soda in a teaspoonful of hot water is the best remedy he has ever tried to relieve the vomiting in that disease—black vomit. It is to be given every ten, fifteen or twenty minutes. The bicarbonate is converted in the liver into the glycocholate and taurochlorate of soda, the natural solvent of the bile.

Petit, a distinguished French surgeon, proposed "gastrotomy" for the removal of gall-stones from the gall bladder in 1733, but the operation does not appear to have been performed until 1876, when, according to a note in "Reynold's System," by Hartshorn, Bartholow performed cholecystotomy, and since then the operation has been performed by George Brown, J. Marion Sims, W. W. Keen, Bryant and Lawson Tait: the last two successfully.

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The Trephine Plate.—Referring to the popular and widely-disseminated idea that a silver plate is inserted after trephining, Professor Brinton says that he has very carefully examined all the ancient and modern literature, and failed to find a single instance reported of any metal plate being inserted after trephining, and also any scientific reference to it in any way. What is the origin of the idea among the laity?

# RÉSUMÉ OF ORIGINAL ARTICLES

## IN OTHER JOURNALS.

THE PHYSIOLOGICAL ACTION OF DIGITALIS.—In the *American Journal of Medical Sciences* Dr. Samuel Nickles, of Cincinnati, summarizes the present state of our knowledge of the physiological action of digitalis, and his paper is specially instructive, since the doctrines now universally taught regarding the action and uses of digitalis differ in a number of important points from those held two decades ago. Then we were taught that digitalis was essentially a sedative affecting strongly the nervous system, thus causing feeble and slow heart action. Now the latest authors teach that the nervous system is only secondarily affected, while the heart is directly influenced, its action becoming more powerful though slower. Twenty years ago we were taught that digitalis was a diuretic directly acting upon the kidneys, thus producing in many diseases a greater secretion of urine. To-day we are told that digitalis does not act upon the kidneys at all, and only secondarily affects the secretion of urine by causing a change in the systemic circulation. In one point there is universal agreement, that digitalis recklessly used may produce the most disastrous effects, and that these may occur quite unexpectedly in consequence of *cumulative action*. But not in regard to the *modus operandi* do present authors differ from their predecessors, but also as to the therapeutic indications. Two decades ago digitalis was held to be indicated when the heart's action was too powerful; now we are informed that it is useful only when the heart's action is too feeble. Then authors taught that digitalis would control and hence favorably influence a hypertrophied heart, while present writers contend that every disease of the heart attended with excessive action is aggravated. It was held for a century that digitalis, though not eminently useful, was still often of great service in dropsy dependent upon organic disease of the kidneys; but now we hear that in diseases of the kidney attended with diminished diuresis it is almost always useless, and exceedingly dangerous.

OPERATIVE TREATMENT IN INTESTINAL OBSTRUCTION.—In the first Harveian Lecture (*Brit. Med. Journal*, November, 1884), Mr. Thomas Bryant lays down the following rules for operative treatment: 1. Laparotomy should be undertaken as soon as the dignosis of acute intestinal strangulation is made. There should be no delay allowed for the formation of a specific diagnosis of its cause. It should likewise be proposed in all cases of acute intussusception, and of chronic, which have failed within three, or, at the most, four days, to be relieved by other treatment. 2. In all operations of laparotomy, it is to the cæcum that the surgeon should first advance, since it is from it he will obtain his best guide. If this be distended, he will at once know that the cause of obstruction is below; if it be found collapsed, or not tense, the obstruction must be above. Adhesions or bands are, moreover, more frequently near to, or associated with, the cæcum, than with any other part of the intestinal tract. It is also in the right iliac fossa that the collapsed small intestine, in cases of acute strangulation, is usually to be found; and, with this as a starting-point, the surgeon will have less difficulty in tracing up the intestine to the seat of strangulation than if he begins at a distended coil, when it will be a matter of chance whether he travels away from or towards the special object of his search—the seat of obstruction. 3. In a laparotomy, when the strangulated coil of bowel is gangrenous, it should be brought out of the wound, and the gangrenous knuckle resected. The proximal and distal ends of the resected bowel should then be stitched to the edge of the wound, and an artificial anus established. 4. Nélaton's operation of enterotomy should be undertaken in all cases of intestinal strangulation, when laparotomy is rejected or seems inapplicable, as well as in cases of intussusception in which the invaginated bowel cannot readily be released. It should be performed in the right groin, or, rather, right iliac fossa. 5. If laparotomy succeed, the cause which called for its removal, and the normal action of the bowel is restored. If resorted to early, and as a rule of practice, it is probable that it would be more successful than the treatment by opium, inflation, or purgatives, which has hitherto been in vogue.

ABSCESS EMPTIED WITHOUT CICATRIX.—To cure an abscess without a cicatrix, Dr. Quinlan (*Med. and Surg. Reporter*) uses a silver wire passed through the abscess, before it has reached the skin, and retained there. It acts as a drain, he says, and has never failed in his hands.

THE DYSPNŒA OF BRIGHT'S DISEASE.—Dr. Howard in the *Canada Medical and Surgical Journal*, November, 1884, says: 1. That marked dyspnœa may occur in Bright's disease not due to gross lesions in the lungs, pleura, or heart—such as inflammation or œdema of the lungs, hydrothorax, or pleurisy with effusion, endo or peri-carditis, or valvular disease. 2. That it may be a continuous dyspnœa, or of paroxysmal character, resembling ordinary spasmodic asthma; and that these types may occur in the same case, although, in his experience, the continued variety is more frequent than the asthmatic. 3. That these forms of dyspnœa may occur as the prominent symptoms of renal disease, and their origin may escape recognition if the urine be not carefully examined, as well as the heart and pulse. 4. That Cheyne-Stokes respiration is often a symptom of Bright's disease, and that it obtains in both acute parenchymatous and in chronic interstitial nephritis. 5. That while usually an evidence that the fatal issue is near at hand, it may occur in a chronic form, and may occur for weeks, perhaps even for years. 6. That these several forms of dyspnœa just mentioned are very probably due to that defective renal elimination called uræmia. 7. That in the acute forms of Bright's disease, serious or fatal dyspnœa sometimes, but rarely, occurs in connection with effusion into the submucous membrane of the larynx (œdema glottidis).

THE RATIONAL TREATMENT OF CHOREA.—Dr. Van Bibber having seen sixty-eight cases of this disease within a year, and the treatment suggested having been successfully carried out, including many cases which became worse under the usual remedies, submits in the *Journal of Neurology* a report of them. The treatment consists in putting the patient to bed, putting the muscles in the best position for rest, and avoidance of those sources of irritation which would cause them to contract and produce that condition which it is desired to cure. Massage is to be thoroughly used three times a day. Massage will quiet the restlessness, which comes on in the afternoon, sooner and more permanently than any other means. All unnecessary talking is to be avoided. Diet to be nourishing and abundant. The usual remedies can be given in addition, the patient being in the best possible condition to be favorably affected by them. The confinement to bed seldom extends over a month.

OVARIOTOMY AT THREE MONTHS OF AGE—Chiene, in the *Edinburgh Med. Journal*, reports the case of a child three months old who was noticed to have a swelling in the inguinal region. Six days after the swelling had been first noticed, it was operated upon, and found to be the ovary and fallopian tube ; both were removed. In sixteen days the child left the hospital, the wound having healed by first intention.

MACKENZIE ON THE TREATMENT OF GOITRE.—Dr. Morrel Mackenzie (*Brit. Med Jour.*) says : 1. Simple goitre of recent origin, and occurring in young persons, can, in the absence of endemic influences, generally be cured by the administration of iodide of potassium, and, in many cases, by counter-irritation. 2. Fibrous goitre is best treated by parenchymatous injections of iodine. 3. Cystic goitre can be most readily cured by conversion of the cyst into a chronic abscess, which is effected by emptying the cyst, injecting a small quantity of a solution of chloride of iron, and allowing it to remain within the sac for three or four days. 4. When the cyst is of considerable size, it should not be emptied at once, but should be tapped two or three times before the injection is used. 5. Removal of the thyroid body is a dangerous operation, which should never be performed for mere cosmetic purposes, nor even for the relief of urgent dyspnœa, except when less radical measures have failed.

OIL OF GAULTHERIA, THE NEW SPECIFIC FOR RHEUMATISM.—In the *New York Medical Journal* for November 8th, Dr. H. H. Seelye reports one hundred and eighteen cases of acute rheumatism treated with this drug. It seems to have more effect in acute articular rheumatism than in the other forms. Heart complications were not more frequent than with other remedies. From ten to twenty minims may be given in emulsion with glycerine and water, or it may be given in capsules.

A CASE OF IMPERFORATE RECTUM IN WHICH LUMBAR COLOTOMY WAS PERFORMED.—Dr. John H. Packard records, in the *American Journal of the Medical Sciences*, a case of imperforate rectum in which lumbar colotomy was performed with an unsuccessful result. From his experience he is now of the opinion that in cases in which the object is to open the bowel with a view not only to immediate relief, but to the subsequent establishment of the natural passage and closure of that artificially made, inguinal colotomy is the better operation. His preference for the operation in the loin was based upon a belief in its greater safety, as well as upon his familiarity with it as practised upon the adult. But the risk involved in opening the peritoneal cavity, as well as the somewhat greater difficulty of the operation, would seem to be outweighed by the advantage of far readier access to the cul-de-sac forming the terminal part of the gut, and by the better prospect of thus remedying the abnormal condition.

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## ORIGINAL TRANSLATIONS.

THE TREATMENT OF PLEURISY. By PAUL LE GENDRE. Translated from *L'Union Médicale,* September 30, 1884, by H. McS. GAMBLE, M.D., Moorefield, W. Va.

If some Bossuet of therapeutics should wish to write a history of the variations of this science, which counts as least as many churches as the Bishop of Meaux reproached Protestantism with having, this audacious mortal might with advantage select as an example the treatment of pleurisy.

Two facts would probably strike him, which are the following :

I.

In the first place, without going back to the deluge--an epoch at which, in spite of the progress of prehistorical anthropology, we are still ignorant as to how Noah succeeded in treating the crew of his ark—without going back even to Hippocrates, as our colleagues too often think it their duty to do when writing the historical part of a thesis entrusted to their care, and to date matters only from the seventeenth century, one cannot fail being struck with the despotism with which, through the vicissitudes of fashion, each mode of treatment of pleurisy in vogue, turn by turn, has imposed itself upon the physicians of the time.

It is said that in the time of Lycurgus there was in Sparta but one way of cooking. In like manner it seems that all the practitioners of the same generation have docilely accepted the therapeutics then in force and have walked in the steps of their masters with a rare unanimity. These therapeutics have had successively as their pivotal centre, bleeding, drastics, vesicatories, thoracentesis; but, generally, each one of these methods of medication has been during the period of fashion almost exclusively employed and applied without distinction to all cases of pleurisy.

It has been so up to the contemporary period. It has not been more than forty years since "three men, eminent in French medicine, Bouillaud, Chomel and Louis," says M. Peter, "were discussing the question, *not whether one ought to bleed in pleurisy*, but *how much and how often* one ought to draw blood." You see, the principle was not in question, but only the degrees of its application.

However, in our day we have an inverse phenomenon presenting itself to the reflections of the historian. "How times have changed!" Behold what confusion has been introduced into the medical army in regard to the treatment of pleurisy! the unanimity of former days has given place to the conflict of the most opposite opinions, so that the young men who are upon the benches of the school (a consecrated form, but inexact; for the benches of the school are often sparsely occupied, and it is around the beds of the hospital that medical teaching to-day is conducted), the students, we say, hearing teachers equally authorized to pronounce upon the value of such or such a method render verdicts radically opposite, find themselves uniformly in the position of the ass which has immortalized Buridan, doctor *en scolastique.*

Without wishing to make an unseasonable parade of philosophical erudition, and simply to appease the students who might take with bad grace our comparison, we recall the fact that this John Buridan, a disciple of Occam and a partisan of the nominalistic school had proposed, it is said, about the year 1350, to demonstrate by a familiar argument what he called the liberty of indifference, and supposing that an ass, equally pressed by hunger and by thirst, would find himself very much embarrassed to choose between a measure of oats and a pail of water, he asked if the animal would not remain immovable between the objects of his desire.

Might it not likewise be that a timid young doctor, having to treat his first pleurisy (that is to say a pleurisy in his first patient), and recalling with what victorious arguments the teachers whose lectures he has respectfully listened to, turn by turn, affirmed the efficacy, some of leeches, some of tartar emetic, some of vesication and some of the trocar, should end by deciding for abstention pure and simple, for expectation is but being disarmed? And there is another disciple acquired, in spite of himself, to a school already more numerous than is supposed, "that which consists in doing nothing" (Peter) for fear of doing harm.

## II.

We will be accused, perhaps, of exaggerating, of schematizing the situation by literary artifice: we pray you to interrogate, in order to convince yourselves of the reaonableness of the hypothesis, those of our teachers who are holding the fourth and fifth examinations for the doctorate (old régime). How many among us, interrogated upon the best treatment of pleurisy, would dare to formulate with conviction and assurance the least proposition, if they did not know beforehand what are upon this point of therapeutics the opinions of the examiner who is in face of them? And the embarrassment of the candidate is increased if he sees upon the other side of the green cloth, seated side by side, two professors known to teach the opposite opinions: the first a warm partisan of bleeding, or of revulsion, the second as sceptical in regard to one as to the other.

To speak only of revulsion and vesication in particular, we remember having been present at the reading and defence of a thesis in which a pupil of Professor Peter had set forth the utility of revulsion. It is true it was in regard to the treatment of cardiac affections, but as vesication was here equally upon trial, the example is as striking as if it had been a question of the treatment of pleurisy. Professor Brouardel, one of the judges of the thesis, spoke very decidedly against the utility of revulsion in general and of vesication in particular; he did it, doubtless, with that charming good grace so much appreciated by candidates, but also with that brilliant enthusiasm which is so efficient in bringing over to his views many persons of undecided opinions. The prosecution of vesication by his colleagues being over, Professor Peter consoled his pupil with that warmth of language which flows from the firmness of his convictions, he rehabilitated vesication, and upon closing the session, whilst the young doctor was saluting his judges with the embarrassment which upon such an occasion inexperience of the robe with wide sleeves and bands causes us, he concluded by saying to him: "Go, put blisters on your patients and you will cure them!"

I would not dare to affirm that at this moment the author of the thesis, full of joy in possessing at least what Molière calls *licentiam saignandi, purgandi* . . . . and (in the present case) *vesicandi impune per totam terram*, was very much affected by the disagreement which reigned among his teachers upon the thorny question of vesicants; but I imagine that the diversity of their opinions would recur to his memory, and perhaps even cause his pen to tremble, when he prescribed for the first time to a patient to apply upon his chest a flying blister of so many centimetres . . . . At all events, some of those present, of whom we were among the number, could feel with perplexity awakening in their memory, certain aphorisms of the most popular teachers.

## III.

"Once the pleurisy has reached the stationary period, the indication is to secure the resorption of the liquid as rapidly and as completely as possible; the repeated applications of large flying blisters have *an incontestable utility.*" (Jaccoud.)

"Vesicants *possess but a moderate utility* in the treatment of pleurisy; how many patients who have had three, four, and five blisters in the course of their pleurisies, and who have been exposed to the complications of cystitis, of erysipelas and of furuncular eruption, without having derived the least benefit from the vesicating treatment! I believe that vesicants exercise *no efficacious action* upon the effusions of the pleura, and I abstain from prescribing them." (Dieulafoy.)

"I believe that vesication, at the commencement of pleurisy, is a mode of treatment which *may often yield good results*. . . . . No method appears to me better indicated in the treatment of the serous effusion than this revulsive medication, and I will ask the adversaries of the application of revulsions in pleurisy if they do not make use of revulsion with advantage in other effusions, and particularly in those of the articulations or of the pericardium; I do not know why what succeeds well in hydrarthrosis or in pericarditis should not succeed also in pleurisy." (Dujardin-Beaumetz.)

Woillez regrets, with Foussagrives, that the employment of mercurials has been discarded. Prof. Jaccoud replies: "The efficacy of calomel is illusory."

Finally, Prof. G. Sée closes one of his lectures thus: "As to the treatment of pleurisy, there is no necessity for dwelling at length upon this subject; you know my opinion upon internal remedies; diuretics, digitalis, milk diet, nothing succeeds; as to blisters, no person has ever demonstrated their utility; it is the perpetuation of that popular legend which believes in carrying off the water through the skin. I know of but one single means of evacuating the liquid effused into the pleura, that is thoracentesis."

## IV.

If we have thus placed in juxtaposition discordant quotations upon this point, it is not, we beg you to believe, for the puerile and unbecoming desire to parade the contradictions of our most eminent masters.

That disagreement reigns among the most learned physicians of any period upon important questions of therapeutics, could surprise only persons strangers to medicine; but is it not interesting to inquire in such a case what is the cause of such a profound disagreement? But the uncertainty, manifest to-day among practitioners upon the point which engages our attention, is owing, we believe, to the fact that the progress of the *clinique* has relegated to the condition of a dead letter the chapter *pleurisy* in treatises upon *pathology*. In proportion that one has advanced in the clinical study of the forms and varieties of pleural inflammation, the multiplicity of phases that one has seen it affect has rendered more and more difficult the establishment of general therapeutic rules. How can we formulate a uniform treatment of *pleurisy* if there are only *pleuritics?* This or that method which succeeds in one case must fail in another, and perhaps each author has been wrong in generalizing too much.

Professor G. Sée was right, then, in saying: "Pleurisy is one of those diseases the study of which is never exhausted. Essentially variable in its causes, in its beginnings, in its progress, in its symptoms, it is to the physician an incessantly renewed source of discussion, it may be from the standpoint of its diagnosis, it may be from the stand-point of its treatment."

Since such is the case, it ought to be permitted a young man, addressing young men like himself, if they share the same embarrassment which he has ingenuously confessed, to expose modestly those therapeutical indications which appear to him to be defined with the greatest clearness from the counsels and examples of his teachers.

### PERPLEXITIES RELATIVE TO THE TREATMENT OF ACUTE PLEURISY.

### I.

If it is true that it is necessary to consider rather the *pleuritics* than the *pleurisies*, it remains none the less indispensable to admit certain types of pleuritics, in order to discuss the therapeutical indications which may suit each one of them. For it is evidently impossible to absolutely renounce "that right to abstraction, without which there is no pathology" (Hanot) nor even clinic.

We will subscribe without reserve to that phrase of M. Lancereaux; that pleurisy "an affection simple in appearance is, nevertheless, one of the most complex when one takes the trouble to analyze all its elements; and not only do there exist multiple pleuritic types, but each one of these types, arising from a special cause, having a particular modality, a peculiar evolution, gives rise from that very fact, to prognostic indications and therapeutics variable and often very different." But we should be incompletely informed as to the number and nature of these types, if we confined ourselves to the purely anatomo-pathological classification which he gives of the inflammations of the pleura, when he groups them under three heads: exudative pleuritis, suppurative pleuritis, proliferative or adhesive pleuritis.

The anatomical views upon which this division rests are far from deserving to be contemned, and we shall have to utilize them from a therapeutical standpoint without any doubt, but they would be insufficient if there were not added thereto some etiological data. M. Lancereaux, although an eminent anatomo-pathologist, is also too consummate a clinician not to have understood this, and, among the pleurites which have as a common characteristic a sero-fibrinous exudation, he distinguishes the pleurisy *a frigore*, the rheumatismal pleurisy, a type no less well defined and manifestly different; then, by the side of these two types he ranges two others, uræmic pleurisy and the plueral effusion which supervenes sometimes in the decline of a lobar pneumonia.

Nevertheless, these divisions are not yet sufficient to answer to the necessities of the clinique; without speaking of the characters so well defined which distinguish from the point of view of the symptoms and the therapeutical indications the pleurisy *a frigore* localized in such or such a part of the pleura (diaphragmatic, interlobar), etc., there is still room for the clinician to attach a very great importance to certain physiological or pathological conditions peculiar to the subject in whom a pleuritis appears, whether exudative or purulent. A woman in the state of pregnancy, of puerperality, or of lactation, a child, or an old man, one suffering from marsh miasm, or lead poisoning, a blennorrhagic, or syphilitic, a sanguine, or a chloro-anæmic subject, if they come to be attacked with pleurisy evidently could not constitute types from a standpoint of *nosology*, under pain of leading to the downfall of this science, and to the negation of all classification. But, nevertheless, these are types for the *clinician*, since to each one of these subjects different *therapeutical* indications will be adapted. To pass in review all these special cases, and many others which may present themselves to the practitioner, would exceed the limits of a JOURNAL article, and, above all, our powers. Let us content ourselves with considering some few of them.

## II.

We may in the first place imagine ourselves in face of the type to which M. Lancereaux has formerly consecrated an instructive clinique in this JOURNAL: pleurisy or pleuritis *a frigore* in a healthy adult—"Organism sound, pleura sound, acute pleurisy," according to the very clear formula of M. Peter.

The disease commences, the chill is of recent date; the pain in the side and the dyspnœa are intense, the fever high, and the stethoscopic signs reveal to us the existence it may be of friction sounds, it may be of an effusion as yet but scanty. Here commence the perplexities of the young physician who has not yet contracted habits in therapeutics, for he feels himself assailed at once by the recollection of the multiple instructions which he has received.

Can a pleurisy be *jugulated* by the antiphlogistic method? That seems to us doubtful, we have never seen it done. Can we lessen the duration of it? We believe so, but by what means?

We think in the first place of bleeding.

Without doubt there could be no question of a restoration of the practice of the seventeenth century.

In vain has Guy Patin been an infinitely sprightly man; it is impossible not to make merry at his expense, when he reports the following observations: "I formerly treated a gentleman, aged seven years, who fell into a severe pleurisy from having become overheated playing at tennis. He was bled thirteen times and was cured in fifteen days as if by miracle." As if by miracle is not perhaps too strong!

But, if we refuse to share the enthusiasm of that excellent Guy Patin for phlebotomy *à outrance*, and to repeat with him that verse, which is not one of the finest of Joachim du Bellay,

O bonne! O saincte! O divine saignée!

we have read and reread the brilliant cliniques of Prof. Peter, and we know that he extols warmly the abstraction of blood at the commencement of primary acute pleurisy. However, it does not seem that his conviction has gained over many of his confrères; for, after having spent twelve years in the hospital, and having seen pleurisies treated by about fifteen of our teachers, we have not yet had to practice a single bleeding in a pleuritic subject. It is true that M. Peter himself "does not usually bleed in cases of pleurisy in the hospital as he does sometimes in the city, on account of the radical weakness of the population of these asylums, or of the remote date of the affection." We will lay aside then the idea of bleeding in general.

On the other hand, we fully assent to the precept of *local abstraction of blood*, which we have always seen followed by amendment of the two most disagreeable symptoms, the pain and dyspnœa. We believe their action more efficacious than that of the injection of morphine. Prof. Sée, distinguishing judiciously the dyspnœa of the commencement of pleurisy, which is dependent upon the pain, from the mechanical dyspnœa, which progresses with the effusion, prescribes against the first the injection of morphine. The latter certainly gives relief, but is only transient, as it has seemed to us, whilst we have always obtained, after the application of wet cups in sufficient number, a definite suppression of the pain and of the associated dyspnœa. Besides, nothing prevents the combination of the two means, and that is what we should do. Wet cups to the number of four, six, twelve, twenty even, may be applied either horizontally, following the length of an intercostal space when the pain appears to be limited thereto, or upon several spaces when it is diffused. Wet cups are generally less repugnant to patients than leeches, which are, however, in the city more easy of application. The flow of the blood may be favored by the application of a large cataplasm.

As a means of relieving the dyspnœa and the pain, it has been proposed to encase the side of the affected thorax with strips of diachylon, as in the case of fracture of the ribs.

### III.

In order to rapidly check the progress of an acute pleurisy, some physicians still have recourse to energetic *purgatives.* The drastics and the emeto-cathartics have enjoyed at a certain time a favor which they perhaps deserve.

The administration of tartar emetic in large doses, determining abundant evacuations, has manifestly been followed, in several accounts which we have collected, by a fall of the temperature and a diminution of the effusion at a stage in which the latter seemed still to be increasing. But we hardly dare to make this assertion in face of the imposing affirmation of M. Jaccoud, who says that "he has many times observed that the efficacy of tartar emetic is limited, in the first stage, to its antipyretic action, and in the second to its evacuating action; for, if the emetic is tolerated without evacuation, that is to say, if it acts according to the theory of the contra-stimulus, it is without effect upon the resorption of the liquid."

M. Peter, deplores somewhere that "science is actually made by very young persons hardly out of the schools, and whose experience is doubly insufficient, since it has not the verification either of age or of observation in a medium different from that of the hospital;" we certainly would not wish to be reproached with the least intention of reforming science, and we are quite disposed to accept the teaching of our masters.

And yet, slight as may be the result to be hoped for from the precarious administration of an energetic emeto-cathartic, we will have recourse to it when the occasion presents, if the patient is robust and *a fortiori*, if there exists a saburral state, however, slightly pronounced.

### IV.

This done, the time has come to attack the litigious problem of revulsion, or, to speak clearly, of vesication, for the other means of revulsion have not many partisans. The sinapism, painting with the tincture of iodine, are seldom prescribed except by the friends of abstention, decorated in this instance with the name of expectation dissimulated. We will only mention ignipuncture, even the potential cauterization (Antonin Martin), or the application of induced currents (Brambilla), and we will set forth our perplexities upon the subject of the cantharides plaster.

Certainly, the reading of all that has been written upon this subject is well calculated to plunge us into discouragement.

Vesication counts some high and powerful detractors : we have spoken of the scepticism which M. Brouardel holds in regard to it, and M. G. Sée is but little better disposed in its favor. We can quote a phrase of an adversary of less notoriety, who even expresses his opinion with quite an aggressive sharpness towards the physicians of opposite views : "injurious at the commencement, powerless in the stationary period, for it can accomplish nothing in the organization of the resorbent false membranes, vesication is useless in the stage of regression, unless the physician desires to give himself prestige in the mind of his patient." (Arnould, *Recueil de Méd*, etc., 1880, 1er fasc.)

O poor vesicant, behold thyself well-abused, and with thee those who have faith in thy virtues! For thou canst also glory in having enthusiastic defenders, and perhaps, after all, hast thou not deserved

"Either this excess of honor or this indignity!"

Moreover, not only does the critic find himself between the two opposing camps of those who are willing to apply vesicants to the subjects of pleurisy and of those who refuse to use them ; but among the partisans of the affirmative the question is still agitated as to the time when it is proper to use them : at the commencement? in the stage of development? or in the decline?

Quite at the commencement is a formula which has scarcely a defender any longer. "It has been said," writes M. Jaccoud, "that in the stage of febrile excitement a large blister, applied as soon as the friction sound is heard, may prevent the liquid effusion and consequently cut short the disease ; I will not deny the fact, but this practice has never succeeded with me, and at this moment the blister has always seemed to me to agitate and cause the patient to suffer without any advantage." M Jules Besnier has attempted to establish the fact, in favor of the early application of the blister, that, according to the investigations of M. Galippe, cantharidine exercised an antipyretic action. This argument may be passed by in silence.

It is a little after the period of invasion that M. Lancereaux believes to be the only, the physiological moment and the one to be selected. The blister seems to him "the best means of limiting or even of arresting the process of effusion, but upon the condition that it shall be employed opportunely, that is to say, in the first eight or ten days of the disease ; later, it possesses no efficacy." The learned physician of la Pitié rests his argument upon anatomo-pathological data which borrow a great value from his high authority in such matters.

In fact, according to him, there is ground for distinguishing in acute pleurisy *a frigore* three phases. In the ascending period, corresponding to the primary irritation of the pleura, the lymphatic vessels are gorged with a liquid which, after a few days, in consequence no doubt of an exaggeration of the fibrine, coagulates, so that there comes a time when these vessels are found obstructed by concretions. After this period of eight or ten days commences the period of statu quo, when the effusion remains stationary, perforce, until the fibrinous plugs of the circulatory network undergo a granulo-fatty transformation, are disintegrated and carried away by the lymphatic current or resorbed. This lasts from four to five weeks. Then the descending period or the period of resolution, characterized anatomically by the transformation, the liquefaction and the disappearance of the coagula enclosed in the vessels and the lymphatic lacunæ, is also clinically marked by the resorption in two or three days of the pleural liquid, when a diuresis supervenes, as if the patient urinated his effusion away. Also, as a consequence of these anatomical views does revulsion by the application of blisters appear to M. Lancereaux useful in the first stage, whilst it is literally useless in the second, resorption being impossible because of the obstruction of the vessels, and it serves but little purpose in the third, since resolution then takes place spontaneously. This view appears to him applicable to pilocarpine, which could have given advantageous results only at the commencement. Quite to the contrary, our dear master, M. Dujardin-Beaumetz, is inclined to admit that the benefits derived from this method are by so much the greater as the period of acuteness has disappeared, and it is likewise during the period of stasis that M. Jaccoud believes the repeated applications of large flying blisters to be of an incontestable utility.

Obliged, however, to come to a determination in the presence of those divergencies of opinion, and after having attentively observed the result of the practice of our teachers, we shall decide to put the first blister on, not during the excitement of invasion, but nevertheless during the first few days; for the argument of M. Lancereaux seems to us very valid.

## V.

A few hints relative to the place and mode of application of the blister are not perhaps out of season, since we have no pretensions to address other than young practitioners.

We should not like to place it in the infra-spinous fossa or in the dorsal groove, not in order to allow our patient the facility of lying on his back, devoted as the subject of pleurisy is to the lateral decubitus, but in order to be able to dress it without making him sit up. It seems to us that there is also some inconvenience in placing the blister in the axillary line, upon which we may be called to practice thoracentesis if the infusion increases very rapidly before the blister is dry. But the vesicant may be divided into two bands, separated by a vertical interval of five centimetres, which corresponds to the axillary line.

The fear of renal cantharidism, which the interesting and exact experiments of M. Cornil upon cantharidic nephritis might justify, or of vesical cantharidism, quite rare, however, could not arrest us, except in case the patient had been attacked by a former affection of the urinary apparatus. In healthy subjects we have never seen cantharidism supervene when the following precautions had been taken: without speaking of the illusory usage, as it appears, of camphorating the vesicant, or of covering it with oiled paper—in not prolonging the application beyond phlyctenulation, the absorption of a notable quantity of cantharidin is prevented—the recommendation to drink pretty abundantly (a litre of milk in a few hours) facilitates, moreover, renal elimination; finally, a cataplasm, applied to the abdomen, and a clyster constitute a sort of antiphlogistic atmosphere for the bladder.

The vesicant removed, it can only be advantageous to substitute a cataplasm for it for a few hours. Finally, the phlyctenæ once pierced, we prefer to blotting paper, or even to wadding as a dressing, following the practice adopted by our teacher, M. A. Chauffard, a large plaque of diachylon, which may be left in place, and under which cicatrization is accomplished without incumbrance, and which does not interfere in any way with stethoscopic examination.

### TREATMENT OF DIFFERENT CASES OF PLEURISY.

If our readers will permit us to take them to the bedside of a certain pleuritic patient, upon whom we had decided to apply a vesicant, we beg them in addition to authorize us to offer several suggestions in regard to this patient.

It may be in the first place, we hope it is, that he has derived from our treatment a distinct benefit. If the modification of the stethoscopic signs leads us to think that the pleural effusion has diminished, and that the pseudo-membranous exudation predominates, we will be tempted to see therein an indication to repeat the employment of revulsives under different forms (cantharides plaster, ignipuncture, painting with iodine), and perhaps it would not be unreasonable to institute parallelly an internal treatment by the iodides in small daily doses, in the hope of promoting the nutritive exchanges (iodide of potassium, of sodium or of iron). Is it at this moment that Laennec would have had recourse to mercurial frictions, which seemed to him evidently to favor resolution and absorption? To-day mercurials have but few partisans, at least in France. It might be, on the contrary, that the level of the effused liquid had not been sensibly lowered; in this case, if the mobility of the effusion is attested by the easy displacement of the line of dulness, the indication will rather be to recur to the means capable of withdrawing from the organism a notable quantity of water by increasing the normal secretions—purgatives, diuretics, sudorifics and even sialagogues.

Among the diuretics we should prefer to those which act by irritating the kidney, as the salts of potash (nitrate or acetate), those which increase the cardio-vascular tension. Digitalis has stood the test in this respect; but, if we fear its cumulative effects, we could find a useful succedaneum to it in cafeine, *cafaeine*, in which the majority of observervs agree in recognizing a manifest diuretic action, and which Gubler a little enthusiastically proclaims an *ideal* diuretic; it will render in more than one case good service: less striking, however, than certain asystolics in which M. H. Huchard and M. Lépine have shown us marvelous effects. M. Renaut (of Lyon), in prescribing it in the dose of two grammes, has several times seen abundant effusions rapidly absorbed.

As a sudorific, *pilocarpine*, which, after having been utilized by M. Créquy among the first, has gained variable results in the hands of Gubler, Grasset, Vulpian, Landrieux, Huchard, etc., may be administered in the dose of two centigrammes by hypodermic injections for a few days. Unfortunately the action of the alkaloid of jaborandi is inconstant; it does not produce a sudation equally profuse in all subjects, and when it is confined in its effect to bringing about an abundant salivation, its influence is almost nil upon the resorption of the effusion.

When after the application of a vesicant the pleural effusion does not diminish, or increases, the propriety of *thoracentesis* ought to be discussed.

No one thinks of denying to-day that this operation is one of the greatest conquests of therapeutics. But, if the indications, the contra-indications and the operative procedure are definitely settled, it is not without interest to recall the fact that its history has been marked by manifest exaggerations. By as much as the resistance was great which Trousseau had met with among his contemporaries, when he began to practice his first punctures with the trocar of Reybard, by so much was the enthusiasm of physicians profound in favor of thoracentesis, when M. Dieulafoy had applied to this operation the aspirative method which reduced it to an insignificant prick of a needle; and, when M. Potain had rendered, by different improvements, the management of it so simple, they then began to play with the trocar as they had formerly played with the lancet. Pleuræ were punctured in which there were not five hundred grammes of liquid, and Béhier authorized a thesis upon the treatment of acute pleurisy by thoracentesis, performed in spite of the fever as soon as the presence of an effusion had been determined.

We have well recovered to-day from this furore of puncture. It must be admitted that M. Dieulafoy has never written a line which authorized these excesses. He had, at first, very wisely laid down the indications and the contra-indications, which have remained to-day such as he then formulated them.

Be this as it may, a day came when M. Ernest Besnier, standing upon the solid base of statistics, proved that pleurisy had become, since the generalization of the treatment, reduced almost entirely to thoracentesis, a much graver disease than at the time when it was treated by antiphlogistic and revulsive measures. Then many physicians opened their eyes, and they ceased to puncture at random.

One thing is certain; at present we see thoracentesis practised much less frequently in the hospitals than six years ago. Do the subjects of pleurisy recover less quickly and less completely? It does not seem so.

Physicians have returned to the directions formerly prescribed by the author of the aspirative method, from which they ought never to have departed.

In the first place, everybody is agreed upon the necessity of thoracentesis in a case of *urgency*. "When the dulness ascends behind as high as the spine of the scapula, and obscurity of the sound replaces in the clavicular region the high tone of the Skodic sound; when, finally, the pleurisy occupying the left side, the point of the heart beats between the sternum and the right breast, although at this moment the pleural cavity is not filled to the maximum (such signs in an adult denote that the effusion equals two litres), it is necessary to operate, and not to forget that to put off until the next day is an unfortunate proceeding which costs the life of the patient." "In all other circumstances, thoracentesis is *debatable* . . . . If the diminution of the effusion takes place naturally, and if its resorption appears to be rapid, it is useless to intervene. But if the fluid effused remains stationary, or if its resorption appears to be slow, it is necessary to operate. It is not with impunity that a liquid sojourns for a long time in the pleura, the displaced organs become fixed, the lung respires badly, two of the principal functions of the economy, hæmatosis and respiration, are compromised without counting, in predisposed individuals, the passage of the pleurisy into chronicity and purulence." (Dieulafoy.)

The *operative procedure* in thoracentesis is fixed to-day in a precise manner, and the following rules should not be departed from :

If the aspirator is employed, it is necessary to take the needle, or, better, the trocar No. 2, dip it into alcohol and turn it. Thanks to this precaution, one will never incur the reproach of having caused purulence of the effusion by the introduction of microbes into the pleura.

The thoracentesis will be preceded by a small subcutaneous injection of morphine, or, at least, recourse will be had to it as soon as the patient shall be seized with the first paroxysm of coughing.

More than one litre of liquid must never be withdrawn at a sitting ; if this precept, upon which M. Dieulafoy has formally insisted, had always been observed, one would not have had to deplore the few cases of albuminous expectoration which have at a certain epoch so much frightened practitioners. It is probably through fear of the too rapid removal of pressure from the lung that some physicians have adhered to the use of the trocar of Reybard.

In proportion as the escape of the liquid takes place ; if, above all, the intermittent contact of the lung is felt, which we have often heard compared by M. Laboulbene to the gentle rubbing of the wings of a bird, we withdraw the needle or the canula of the trocar gradually towards ourselves, and give a see-saw motion to it in such a manner as to bring it parallel to the costal wall.

About twelve days will be allowed to pass before practising another puncturing, and the effusion must never be drained away to the last drop. The day after the puncture, when the less compressed vessels of the pleura may have recovered their absorbent quality, it appears proper to favor this resorption by administering purgatives, diuretics and sudorifics.

When there is reason to think that the pleura is partitioned by false membranes (areolar pleurisy), it will be prudent to precede the thoracentesis by an exploratory puncture, performed with a Pravaz syringe furnished with a longer needle than that which serves for hypodermic injections.

There are certain subjects in whom, after the cessation of the inflammation, the pleura remains subject to a sort of chronic hyperæmia ; it is like a hydrothorax which succeeds the pleurisy, and, after two or three punctures, the liquid returns each time to the same level. It is useless to eagerly wish to remove these relapsing effusions. Each new puncture would be a sort of white bleeding, which, weakening the patient, would be very far from hastening the absorption. It is then to a general therapeusis capable of modifying the debilitated organism that it is rather advisable to have recourse. It has been proposed, in such case, to replace a portion of the liquid withdrawn by the intrapleural injection of a liquid which can modify the secreting surface, alcohol, for example; that is to say, to treat, in short, these pleural effusions like hydrarthrosis or hydrocele of a chronic nature. We have not seen this proceeding employed. In the convalescence from pleurisy, it is necessary still to preoccupy ourselves in combating the atrophy of the muscles of the thoracic wall, to favor the return of the functions of the lungs, which have been compressed for a greater or less length of time. Electrization, massage, a few sulphurous douches, will act favorably in this direction, as also a prudently-conducted gymnastic exercise capable of combating the retraction of the lately-diseased side. We would, however, recommend avoiding the extensive enforced movements of elevation of the shoulder ; for it might happen that some neomembranous bridle inserted upon the visceral pleura should be strained with sufficient violence to carry with it a small portion of the pulmonary parenchyma. We know of a case in which the sudden production of pneumothorax during convalescence from pleurisy appeared to be due to this mechanism.

We have until now been speaking of the treatment of acute, *frank,* primary pleurisy, pleurisy *a frigore*, and it is probable that certain of our readers have been obfuscated by this designation, for quite a large number of physicians do not admit the existence of frank pleurisy.

To cite but one, one of our most brilliant *agrégés*, M. Landouzy, in a recent clinique, declared that he could not admit this form of pleurisy except *in altogether exceptional cases.* "Ninety-eight times in a hundred the pleural effusions, the pretended pleurisies *a frigore*, are the result of tuberculosis apparent or concealed, and because it cannot always be proven, it does not follow that this primary tuberculosis does not exist." M. Landouzy even pushes things so far as to add, apropos of a young girl eighteen years of age, who, having been attacked with pleurisy at the age of eleven years, and cured in three months, has not since then presented any trouble, functional or organic : "I would not marry her ; for, to my mind, she remains still suspected of tuberculosis, in spite of the seven years passed since her effusion, without having presented the least derangement of her health."

Is not this going a little too far? One might be tempted to reply to this sally of the sprightly physician of the hospital Tenon, that he holds the language of a hardened bachelor, and that such an anathema fulminated against so many young girls, who have had a pleurisy while they were still playing with doll babies, is not calculated to favor the repopulation of France.

Fortunately for the poor girls, we might induce the young men who should hesitate to lead them to the altar to read the following opinion of M. J. Renaut (of Lyon) : "You will find a number of distinguished clinicians for whom every pleurisy not symptomatic of rheumatism, of albuminuria, of the fevers or of the different septicæmiæ, is, whatever may have been the frankness of its evolution, a manifestation of pulmonary tuberculosis. I hasten to say that this is not only an exaggeration, but an error. I can no longer count the cases wherein I have found myself at the amphitheatre, in the presence of abundant pleuritic effusions, which had determined death with all the ordinary lesions of acute pleural inflammation, and in which the most active examination has not enabled me, myself a professional histologist, to recognize a single tubercle in the state of actual evolution, whether in the pulmonary parenchyma, or in the diseased pleura. . . There exist then non-diathesic pleurisies."

M. Renaut recognizes the fact besides, that quite frequently certain forms of pleurisy are seen supervening in individuals still free from tuberculosis, at least in appearance, to be followed after a short time by the tuberculous evolution (*phthisiogenic pleurisy*).

Interesting as such a question may be from a prognostic point of view, having in view only the treatment, we do not intend to seek its solution. The sole indication that the opinion of those who deny the frank form of pleurisy ought to hold out to the therapeutist is to institute a vigorous prophylaxis and hygiene about the subjects of pleurisy, and to organize around them for long years a surveillance full of solicitude.

### TREATMENT OF DIFFERENT CASES OF PLEURISY.

The partisans of the diathesic nature of pleurisy attribute to *rheumatism* those cases of pleurisy which escape the suspicion of being tuberculous.

It is known that rheumatic subjects may be attacked with several kinds of pleurisy. During the acute febrile attack they may have a simple or double one, mobile, fugaceous and alternating sometimes as if by a sort of balancing with the articular flexions. They may also have it outside of all arthropathic manifestation. The lamented professor Lasègue had studied pleurisy in a special manner, and particularly the pleurisy of rheumatics. Unfortunately the views which he dispensed so generally at the bed-side of the sick are nearly lost to those who have not had the honor and advantage of being near him; for they have only reached us at second hand in the lectures published after his death. "Pleurisy is not a disease of the pleura;" such is the beginning of one of his cliniques, the authenticity of which is moreover guaranteed by the standing of the person who has reported it, M. Faisans, at present a hospital physician. Further on we read: "This is as much as to say that every pleurisy is secondary. . . . The more we have investigated the pathology of the serous membranes the more we have been convinced that these lining membranes, passive organs, *par excellence,* do but undergo the *contre-coup* of the alterations experienced by the parenchyma which they protect." From a therapeutic point of view, added Lasègue, in such matters, the course of the physician depends largely upon the view that he entertains of the succession and of the subordination of the symptoms; if he believes that the serous membrane has been primarily attacked, it is that he would aim at in his treatment; in the contrary case he would address himself directly to the organ which appears to him to assume the greater part of responsibility."

Lasègue then divided pleurisies into visceral or pulmonary, and costal or fibrous pleurisy. The latter is constituted by an alteration in the sub-pleural fibrous tissue; it is this "that we designate under the name of rheumatic pleurisy," said he, "and this denomination is very correct."

Lasègue compared what takes place, then, in the pleura to that phlegmasic action of which the articulations are the seat. The pain makes its appearance, affecting the periarticular tissues (on a level with the insertions of the tendons); then it is but a few hours after that the fever is lighted up that the serous effusion takes place. The patient has the pleurisy of his articulation.

The effusion in rheumatic pleurisy assumes, then, a special topographical disposition, it is promptly limited by a neo-membranous exudation, it collects at the posterior part of the thorax with an invariable form, whatever may be the position of the patient; it is the pleurisy *en galette*, in opposition to the changing form of pleurisy (*la pleurésie tournante*).

In this rheumatic pleurisy a rapid decrease is observed—a disappearance in three to eight days—frequently it is bilateral. It is cured completely without having any notable adhesions. On the other hand, it is followed sometimes by an atrophy of the muscles of the thorax, analogous to that which attacks the peri-articular muscles after arthritis.

The natural therapeutic conclusion is that there is no active intervention to be made during the period of evolution of rheumatic pleurisy; it progresses generally of itself toward a cure, without thoracentesis and without vesication. It is this that gives the greatest satisfaction to the partisans of expectation. In requital, during and after convalescence, revulsion is indicated upon the wall of the chest (ignipuncture, faradization, respiratory gymnastics).

The treatment of secondary pleurisies offer no special peculiarities. However, it must be remembered that, among the patients whose kidneys perform their functions badly in cases of Bright's disease, it is necessary to abstain from the use of vesicants and irritating diuretics, as the salts of potash; vesicants ought never to be applied to the subjects of diabetes, nor even upon typhoid fever patients.

We do not intend to speak, from a therapeutic point of view, of those singular cases of pleurisy which appear to be the localization of illy-defined infectious states (infectious pleurisy); there are purulent pleurisies in which the empyema demands the general treatment of all kinds of septicæmia.

We will also pass over the considerations relative to the treatment of certain varieties of pleuritic localizations. In diaphragmatic pleurisy, one has above all to combat the plain and the dyspnœa. Interlobar pleurisy is but seldom diagnosticated, and it is above all apropos of purulent pleurisy, to which we shall some day devote a special article, that there is reason to keep in view the eventuality of opening into the bronchial tubes under form of vomicæ.

Per contra, we will say a few words about pleurisy at different ages, and in woman, according to the different physiological stages of her life.

Pleurisy is treated in the child nearly as it is in the adult. M. Cadet de Gassicourt expresses, in regard to thoracentesis, ideas analogous to those we have just developed. He affirms that he has never shared the infatuation of those physicians who thought, at a certain period, that "every pleural liquid ought to be aspirated, at the time when puncturing practised the twelfth day of the pleurisy was elevated into an almost absolute rule, and when every physician who did not cure a pleurisy in fifteen days was exposed to being taxed with ignorance, or, at least, inexcusable timidity."

In infancy, premature puncturing has no other indication than urgency, except in this case it is useless; even the puncture of urgency is rarely necessary. "Most frequently, almost always, indeed, medical means suffice to effect the cure, and these means are simple: gentle purgatives, diuretics, particularly the oxymel of squills, in the dose of one, two, three teaspoonsful a day, according to the age of the child, and finally, and more than all the milk régime, constitute the sum and substance of them. I have tried, like every one, the use of jaborandi, but without success; children vomit it with an extreme facility. I conjoin with it the employment of two or three wet cups over the seat of the pain at the commencement, and flying blisters; in spite of all the evil which has been said of them, I have obtained good results from them, especially when they are applied opportunely, that is to say, when the effusion has become stationary or is commencing to resolve."

Our dear teacher, M. Jules Simon, differs but little in opinion upon this point with his hospital colleague, Trousseau; we still remember the minute directions which we have many a time heard him give to the students who followed him in his visits, when we had the honor of being his interne. He insisted upon the necessity of keeping in bed the child attacked with pleurisy; for many parents have an unfortunate tendency to yield to the desires of the child, who grows weary of being in bed, as soon as the fever has fallen. But, every time that the order of rest in bed is transgressed, an increase of the effusion is observed. As diuretics, a potion containing tincture of squills and digitalis, tea made of the stems of cherries sweetened with syrup of asparagus shoots, milk pure or aromatized. As laxatives, some manna, or a few pastilles of calomel every two or three days. As cutaneous revulsives, small blisters four to five centimetres square, left in place but a short time, and applied successively upon different points, are of more value than large blisters, which would have the effect of putting a curb, so to speak, upon the chest, and preventing the child from dilating its thorax upon the diseased side, to say nothing of the fever and insomnia which they would increase by causing too much pain. M. J. Simon recommends also not to make, upon quite young children, too frequent or too extensive applications of tincture of iodine; for evidence, in consequence of its ready absorption by the skin at this age, has appeared to him, of its being eliminated by the kidney, to determine an irritation which may extend even to albuminuria.

In the old man, pleurisy is a rarity. The effusion, especially, is but seldom seen, in consequence of the "ordinarily numerous and often very close adhesions, and of the thickening of the pleura, which old men almost all present." (Durand-Fardel.) One understands how, in case of pleural inflammation, that cutaneous revulsion has no great effect upon the cellular tissue which envelopes the lungs at all parts, and is found in conditions entirely different from that smooth and polished membrane which is met with in the normal state. However, if an effusion considerable enough to notably embarrass the respiration existed, there would be no reason to recoil before thoracentesis, because of the advanced age of the subject, since M. Durand-Fardel has performed it upon a woman sixty-six years old, and the result was "to prolong life a little by alleviating the suffering."

In woman we have to face pleurisy during pregnancy, lactation and the puerperal state.

Those observers who have studied pleurisy during pregnancy agree in saying that it presents nothing peculiar from a symptomological or prognostic point of view. The state of gestation does not seem to give it any tendency to purulence; there would be no necessity, then, for applying here the remark of M. Verneuil: "that the pregnant woman and the woman recently delivered have a marked tendency to the formation of pus in abundance." Our teacher, M. Siredey, whose competency is so great in matters of this kind, has told us that he had always seen pleurisy evolve normally in the gravid woman. Personally, we have observed a purulent pleurisy *d'emblée* in a woman four months pregnant, who did not seem to have in her antecedents anything which predisposed her to purulence; but a single case signifies nothing. As far as concerns the treatment, the state of gestation creates no special therapeutic indication; on the other hand, it gives rise to several contra-indications. (Baretgin, Th. de Paris, 1880.)

To be reserved in the use of purgatives and to prefer mild purgatives, castor oil, infusion of senna, or saline purgatives to drastics; to use no vesicants without being assured that the kidneys act well. In case of albuminuria, to abstain from them; to be cautious also about diuretics, and especially digitalis; on the contrary, to insist upon the milk régime. As rigid a diet will not be instituted as among other pleuritic subjects in the inflammatory period; for one must not lose sight of the exigencies of a physiological state which obliges the woman to a double expenditure of nutritive materials.

The question of the advisability of thoracentesis is that which embarrasses physicians most who have not yet treated gravid women suffering with pleurisy. Its advisableness could not be contested in case of orthopnœa, a considerable effusion being more dangerous still in the pregnant woman, especially in the latter months, than in any other patient, since the crowding of the diaphragm already engenders dyspnœa, and the insufficiency of hæmatosis is a menace to the life of the child. It will be proper to tap in the fifth space, elevating somewhat the point towards the upper part in order to avoid wounding the diaphragm, which is pushed very high towards the close of pregnancy. In the case of an effusion which has been stationary for a long time and abundant enough to notably hinder respiration, it seems equally indicated to give the patient the benefit of thoracentesis, and such is the advice of Charpentier, Duguet, Vandrant, Verneuil, and Dieulafoy. Far from inducing abortion, on the contrary, we will give to the woman more chances of carrying her pregnancy to the full term, since hæmatosis will be facilitated, and, consequently, the vitality of the child promoted.

In the woman in a physiological puerperal state and in lactation, things are still more simple. Frank pleurisy *a frigore* is frequent under these conditions, for opportunities of getting chilled are not wanting. In a service of lying-in women, we have seen quite a large number of cases of pleurisy of this kind, and yet, when the woman had no complication of genital or uterine origin, all went well. There is no necessity even for abstaining as vigorously from purgatives as one might be tempted to do through fear of drying up the lacteal secretion. The latter will continue to go on normally upon condition that the woman shall continue to nurse. When we had the honor of being the interne of M. Siredey, we have seen him treat by repeated purgatives. tartar emetic largely diluted, for example, nurses attacked with pleurisy, and they have continued to supply their nurslings with milk as abundantly as usual. The histories of two cases related in the "Treatise on Puerperal Diseases" are convincing upon this point•

In this very JOURNAL, M. Graux published last year an account of a case of pleurisy which is extremely interesting from the point of view of its evolution and treatment. The disease had made its appearance during pregnancy at a time which could not be fixed, the symptoms which ordinarily attract attention having been referred to the pregnancy (shortness of breath, dyspnœa, stitch in the side). However, the pregnancy developed almost normally up to its full term, in spite of the considerable quantity of the effusion, and the labor was normal. Fifteen tappings were practised in two months, removing nearly forty litres, for the effusion was reproduced very rapidly without ever becoming purulent. The author thinks that the multiplicity of the tappings, performed, moreover, with extreme antiseptic precautions, was conducive to the cure. "In fact," says he, "in the first month, when the tappings were separated by an interval of ten days, the patient rested and ate only during the three or four days which followed the withdrawal of the fluid, and wasted away during the other six. In the second month, on the contrary, tapping was performed every five days, and in enabling the patient to avoid the period during which she suffered, and could neither eat nor sleep, she was allowed to recover rapidly. At all events, the local and general amelioration coincided clearly with the change of practice."

One will have but very exceptionally, without doubt, to treat a pleurisy with effusion so recurrent as that, and generally one or two thoracenteses, conjoined with the usual treatment of other cases of pleurisy, will effect the cure. It has even seemed to us, at least according to the facts which we have personally observed, that the resorption of the effusion is accomplished more rapidly during lactation, as if it was favored by the very great activity of nutrition in the greater portion of well-constituted nurses.

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TRANSPOSITION OF THE ORGANS.—Dr. Richter concludes that, in the absence of special heart complications, heterotaxia is a morphological variation which exercises no unfavorable influence upon either health or length of life. The occurrence of transposition of the heart while the other organs retain their natural positions is extremely rare; nevertheless, Breschet saw four instances of this malposition in newly-born children, Otto refers to similar cases, Pope (*Lancet*, July 8, 1882) describes one in which the heart's apex was simply turned to the right instead of to the left, without other change in the development of the organs, and Bramwell narrates a case, which was not examined after death.

# ORIGINAL ABSTRACTS.

Convenient Hæmostatic in Uterine Hæmorrhage.—The simplest remedies, and those found in almost all households, are the best in serious cases demanding prompt attention. This may be urged in regard to the remedy recently recommended in the *British Medical Journal*, viz., "Alcoholic Injections in Uterine Hæmorrhage." It is always useful to know of any remedy which can be used, upon the spur of the moment, in cases of uterine hæmorrhage; and it is useless to talk about injections of cold or hot water when there is no injection-apparatus at hand to use. So also is it with perchloride of iron and subcutaneous injection of ergotine; but, if you did not go prepared with these remedies, the patient, in most cases, would be dead before they could be obtained. I have used the strong perchloride once with perfect success in a very bad case, taking it with me in a case of post-partum hæmorrhage; once in a case of this accident, which recurred after twelve hours; and once when the patient died, it arriving too late to save life. Being driven into a corner over a case where most severe hæmorrhage took place immediately after the placenta was expelled, the blood running off the bed into the room—one woman who was present fainting and another running away—I caught hold of a bottle of whiskey which was standing near the washstand basin, and, pouring half the spirit into the basin, I soaked a napkin and introduced it into the uterus, when I had the satisfaction of feeling the uterus immediately contract; the hæmorrhage ceased, and my patient made a good recovery. I have used this treatment several times since, and with the same result.

Simple Means of obtaining Local Anæsthesia.—Dr. Cheize, in the *Glasgow Medical Journal*, writes that, wishing to remove an ingrowing toe-nail, and being without a spray-producer, he covered the toe with a pledget the size of a crown piece, poured ether on it, and evaporated this by means of a pair of bellows; in five minutes anæsthesia was complete, and lasted while the nail was removed and the matrix seared with the actual cautery.

Proctotomy.—Dr. Robert F. Weir proposes (*New York Medical Journal*), in cases of stricture of the rectum requiring the operation of linear rectotomy or proctotomy, to avoid dividing the sphincter ani, as is usually done. His object in this is to hasten the complete recovery of the patient and lessen the pain during convalescence. His method consists (1) in completely stretching the sphincter ani; then (2) in dividing the strictured tissue posteriorly; and then (3) to avoid burrowing, in making a complete artificial fistula, by thrusting the scalpel outside the sphincter into the wound; along the tract thus made a drainage-tube is passed. He has performed this operation once, and with success.

Fecal Fistula in the Scrotum.—Professor Pott reports a case of the above in a well-developed boy of four months. When he was two weeks old, a red point appeared on right side of scrotum, the whole scrotum swelled, finally broke and discharged pus and fecal matter. Since then the fistula had become smaller, and only discharged fecal matter on straining, coughing, etc. Gas generally came with the discharge. The interesting point in the case is that by following a thickened cord up the inguinal canal, it seemed to be shown that this was one of those cases of hernia vaginalis dextra, which are known to occur in children, in which the processus vermiformis is the protruding part, and in which the end of the latter becomes gangrenous, ruptures, and then forms an adhesive union with the inner wall of the scrotum. Such cases of Nature's cure have been reported by Gooch and Armsby, one in a child of six weeks and the other in one of three years. No operation was allowed by the parents in this case of Pott's.

Sea Atmosphere Manufactured to Order.—Dr. B. W. Richardson's latest suggestion in the *Asclepiad* is of a formula which, while not disturbing the comforts of home and family, secures to the patient the benefits which have hitherto necessitated a journey to the sea shore. It consists of a solution of peroxide of hydrogen (ten volumes strength) containing one per cent. ozonic ether, iodine to saturation, and 2.50 per cent. of sea salt. This solution is to be diffused in the sick chamber by means of a spray-producer of such fineness as shall require its operation for the space of an hour to consume two fluid ounces of the fluid. The effect is said to be the agreeable odor of the sea, while it is at the same time the best purifier ever suggested. Tested by the usual solutions and papers, it has been found to be a most active ozonizing method.

The Graver Fevers of Child-Bed.—Dr. W. C. Neville contributes an article on this subject to the *Dublin Jour. of Med. Science*, November, 1884, which thus concludes: 1. There are a variety of puerperal fevers, but no one "puerperal fever," properly so-called. 2. Some of the less serious fevers result from local inflammations, combined with some degree of toxæmia. 3. Various exanthemata—notably scarlatina—may occur about the period of child-bed, and are then manifested in a more or less blurred form, though they can usually be recognized by specific peculiarities. Such fevers are apt to be complicated by endogenetic toxæmia, septic poisoning, or septic infection. 4. There are two chief types of puerperal toxæmia accompanied by fever—the infective and non-infective. 5. The non-infective form is the result of septic poisoning, and comprehends the greater number of sporadic and, in its uncomplicated form, more remediable cases of puerperal fever.

Thallin—Another Antipyretic.—The *Medical Press*, November, 1884, states that "Dr. Von Jaesch, of Vienna, has recently stumbled on still another synthetic antipyretic, which he introduced to the notice of the Society of Physicians of Vienna, on October 31st, the chemical name of which is zetrahydroparachinanizæ. The name no doubt is an excellent one for ceremony and great occasions; but recognizing that life is short, and not to be all spent in pronouncing names, he has mercifully given it the shorter one of thallin, by which it will be sufficiently well known if it proves to be worthy a name at all. He has already employed it in 86 cases of pyrexia of various kinds, viz., pneumonia, typhoid, erysipelas, measles. The fever was cut short with certainty, and without any disagreeable by-effect, but the effect upon the course of the disease was in other respects nil.. "In doses of $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ gm. the temperature fell several degrees. Of the various salts of the drug enumerated by him—sulphate, tartrate, hydrochlorate—he recommends the first-named for clinical purposes, and suggests that it may well be employed when all other antipyretics have failed."

Comma Bacilli.—The authorities of Genoa having placed a well-equipped laboratory at the disposal of Professor Antonio Ceci, he, with Professor Edwin Klebs, instituted a series of researches on the etiology of Asiatic cholera. *La Rivista Internazionale di Medicina e Chirurgia*, for last month, gives a preliminary report ("Communicazione Preventiva") of the joint research. Its results, so far as concerns the comma bacillus, do not accord with those of Professor Koch. The Genoa observers conclude, that comma bacilli are not invariably present in the fæces of cholera patients, or in the intestinal contents of the cadavers of those who have rapidly succumbed to the disease. They also failed to discover the comma bacillus in the air expired by patients in the algid stage of cholera; the blood of these subjects presented, under the microscope, no other morphological changes than increase in the number of white corpuscles, and deeper coloring of the red corpuscles, due to cyanosis. The symptoms, death, and organic changes of individuals stricken with rapid cholera, are not explicable by the slight lesions found in the intestine. In perfectly fresh cases, in which epithelium still existed *in situ*, no comma bacilli were found in the glands of Lieberkühn, although lymphatic cells abounded in the mucous membrane. So far as concerns their morphological characters, the comma bacilli and spirilli of Asiatic cholera proved identical with the comma bacilli and spirilli obtained by Finkler and Prior of Bonn from the culture of the fæces of cholera nostras patients. The same forms of spirilli were found by Klebs in the diarrhœa of an individual suffering from pneumonia.

CIRCULAR INSANITY.—Tonnini (*Archivio Italiano per la Malatti Nervose*, July, 1883) finds that circular insanity may occur in three forms. In the first type mania and melancholia alternate, in the second melancholia and mania, and the third is the periodic type, in which a lucid period intervenes either between the melancholia and mania, or the melancholia passes into mania, and this is followed by a lucid interval, or the mania passes into melancholia, and this is followed by a lucid interval. The period of depression, according to him, presents few peculiarities. The melancholia is usually a simple melancholia and rarely of an hallucinatory or delusional type. It may present an atonic phase. The period of exaltation in many respects resembles psychical paretic dementia. He states that the psychosis, according to Karrer and the French authorities, of the affection is most frequent in females, while the figures given by Krafft, Ebing, Dittmor, Kelp and Fleming speak for its prevalence in the male sex.

SYPHILIS AND PARETIC DEMENTIA.—Kiernan, from an examination of the literature concluded (*Alienist and Neurologist*, July, 1883): 1. From neither a clinical, nor a therapeutical, nor a pathological standpoint, can paretic dementia of non-syphilitic origin be demarcated from that of syphilitic origin. 2. That the etiological influence of syphilis in the production of paretic dementia has been over-estimated by some authorities. 3. That the value of anti-syphilitic treatment in paretic dementia will depend upon the stage at which the syphilis is found, and in no case is it necessarily contra-indicated. These views have recently been corroborated by Dr. H. C. Wood, who says (*Cincinnati Lancet and Clinic*, March 15, 1884,) that syphilis may produce a disorder whose symptoms and lesions do not differ from those of paretic dementia; that true paretic dementia is very frequent in the syphilitic; that the only perceptible difference is curability; that the curable sclerosis may change into or be followed by the incurable sclerosis. The criterion of curability Kiernan has shown to be valueless. He says: "Is curability a valid criterion? Mueller, a hostile witness, denies that it is. Dreschfield remarks that 'In the more chronic syphilo-neuroses where the syphilitic deposit has itself undergone degeneration, changes and established secondary changes in the surrounding nerve matter, treatment will of necessity be of little avail,' and this is the opinion of most syphilographers. Spitzka claims that in cases where syphilis can be positively excluded, mercurial treatment is sometimes of value." In all probability there can be made no distinctive criterion between luetic and non-luetic paretic dementia (*Journal of Nervous and Mental Disease*). Dr. Wood's article ignores the more recent American literature on the luetic psychoses in a way which seems to call for comment.

# SELECTIONS.

## OBSERVATION OF BACTERIA AND UNICELLULAR ALGÆ ON THE SURFACE OF CIRCULATING MONEY COINS. By P. F. REINSCH. Translated by Dr. L. ELSBERG; with remarks by EPHRAIM CUTTER, M.D.

Induced by an accidental circumstance to examine some matter from the surface of a small silver coin, I made the striking observation of innumerable bacteria and unicellular algæ in the thin incrustations and sediments formed by incessant handling of the coin. On examining current pieces of money of different nations and of various denominations, I found the observation confirmed and universally true for all coins that have been in circulation at least several years. Not only silver, but also copper and bronze coins show this peculiar and hitherto entirely undetected micro-vegetation of the most simple organisms upon the most general objects in use.

For the purpose of investigating this hidden life upon the surface of money, some of the matter accumulated, especially upon the projecting ridges in the depressions of the coin, is removed with the point of a knife, mixed with a drop of distilled water, spread out on a slide with slight pressure, and covered. Moderate amplification (250–300 lin.) reveals in the mass, consisting of aggregates of larger and smaller granules, fibres, fat, and especially starch globules, innumerable movable minute corpuscles, the movability of which at first seems to be only the well-known molecular motion, but after some time shows itself as most active bacteroid motion.

With higher magnifying power the bacteria are readily distinguished and prove to be of different forms. There are rod-like bacteria (oscillaroid forms) with oscillating (vibrio) and spiral (spirillum) motion, and spherical bacteria micro-coccoid forms) with peculiar dancing oscillating motion. Sometimes all these forms occur intermixed on one coin; but in most cases either the spherical or the rod bacteria are the more numerous, the first constituting most frequently the main mass. Spirillum is found more rarely, but on careful investigation certainly on very many coins.

Of the typical bacterium, there are found 4-12 linked rods of 0.0055-0.0077 mm. length on all silver, copper, and bronze coins. The end links of the rod are usually thickened into little heads. The auto-mobility of the bacteriod corpuscles disappears immediately on bringing a drop of a solution of iodine or concentrated glycerine to the edge of the copper coins.

I have also discovered on all somewhat old silver and bronze coins examined (German, Austrian, Hungarian, Italian and North American) two quite determined and constant algæ, which, on account of their distinct and constant characters, can at once be identified with known types of algæ, viz., a minutely small *chroococcus* and a unicellular alga, which is more related to *palmella* than to *phytochroma.*

The cells of the *chroococcus* have a diameter of only 0.00595 mm. Four, eight or twelve are united into small spherules, which combine to constitute grape-like masses up to 0.02 mm.

The *palmella*, like algæ in money incrustations, possesses thick-walled cells, with contents mostly highly colored. The cells are met with in all stages of division into two or more parts. Of the palmellæ, *pleurococcus* is the type which comes nearest to this alga. The undivided spherical cells have a diameter of 0.009-0.01 mm. The thickness of the cell wall amounts to about one-tenth of the diameter. The cells with many divisions do not show the regularity of arrangement of daughter-cells that occurs in the typical pleurococcus (*pleurococcus valgaris*).

Aside from the organisms mentioned, money incrustations contain, in addition to undeveloped hyphens, spores of various size and form, which probably belong to mould and dust-mycetes.

The constancy of the characters and occurrence of the two microscopical organisms described allow us to conclude that they occur spontaneously, as is the case with a large number of these most simple organisms ; in other words, that they have not come from without and accidentally adhere, but have their constant origin and seat in the incrustations of coins.

On coins of more recent date, the alga forms are not found at all, and are found only imperfectly developed. The incrustations of such coins contain bacteria only.

It suffices for the present communication to state the fact that these bodies, which are of great importance, occur so regularly in so peculiar a case. Especially from the standpoint of hygiene, the discovery of the existence of organic bodies, which, according to recent experiences, are universally recognized as the carriers and diffusers of epidemic occurrences, upon an object itself the most diffused, points to a further factor to be taken into account of investigation. On the other hand, it is also very probable that part of the process of erosions of the surface of circulating coins is ascribable to the same two organisms.

*Chroococcus monetarum* Sp. Ch. e minimis cellulis subglobosis et angulosis, 4is-8is mucore communi involutis, in familiis minoribus subsphæricis aggregatis.

Diam. cellular : 0.000925 mm.

Diam. familiarum : 0.0046-0.0056 mm.

Hab. in indumentis in monetarum currentium superficie.

*Pleurococcus monetarum.* Sp. Pl. cellulis globosis, cytiodermate crasso, subtorruloso (1-10 diam. cellulæ), indivisis, et 2is usque 8is in familias sphæricas aggregatis, cytio plasmate intense colorato.

Diam. cellular: 0.0074-0.011 mm.

Diam. familiar: 0.011-0.0129 mm.

Hab. in eodem loco.

*Flora*, 1884, No. 8. *Erlangen, February* 21, 1884.

### REMARKS BY E. C.

I have examined old silver and copper coins that have circulated in the United States of North America, and had been kept 30 to 40 years in a collection of rare and curious coins. Most of them dated in the last century.

I found the oscillarous, vibrio and micrococcoid forms described by Professor Reinsch, also the Chroococcus and the Pleurococcus monetarum.

Besides, Dr. Elsberg, who has kindly translated the above, was present and examined the same specimen with the same result.

With a view to see if the growths above found by Prof. R. and ourselves on coins could not be found on the human body, we examined the accumulations of black dirt under the tips of our own finger nails. We reasoned that if these things were found on the coins they must be on the fingers that handle them. The result was that we found the bacteria, save the spirillum; and the algæ, save the Pleurococcus.

The study of the Morphology of Dirt is now in order.

## OBSTETRICS AND DISEASES OF CHILDREN. AN ADDRESS IN OBSTETRICS AND GYNÆCOLOGY. By T. GAILLARD THOMAS, M.D.

If I interpret aright your wishes in requesting from me an address on obstetrics and gynæcology on the occasion which brings you together in this city today, you desire, at the hands of one who has paid more attention to these subjects than the general reader and practitioner, an estimate from his standpoint of the present status of these departments of medicine, their relations to other branches, the advances which the past decade has accomplished for them, and the most signal lines of progress which have been pursued in the accomplishment of such advancement. If my conception of your wishes is correct, my task will not prove a difficult one, nor shall I be forced to weary you with prolix and uninteresting details.

Pardon a passing reference to the infancy of the science of obstetrics, which will serve merely to remind you of facts which you know as well as I do. Obstetrics as an art must always have existed, even among savage nations, and as civilization and refinement have increased, this art has become ever more and more perfect, keeping pace, as other arts have done, with the general advance in a people's knowledge. And thus it is that obstetrics, advancing from the ages of the past, from the period of the wonderful old man of Cos to that of Smellie and Levret, existed as a very perfect art indeed. But it was in nowise a science. He who was to elevate it to this high sphere was found in the person of the great Englishman, William Hunter, whose admirable work upon the gravid uterus did for this department of medicine what the eminent labors of Euclid did for mathematics, and which exists to-day as a valuable part of the library of every intelligent practitioner of midwifery.

From that time to the present a steady advance has been made, and in our day we see the reproach which once upon a time, and that not so very long ago, attached to the "man-midwife" entirely wiped away.

But all this has often been written of; let me leap over the wide chasm which divides two centuries from each other and speak of those improvements in this hundred-year-old science to which the past decade has given birth.

With how little pomp and parade are the greatest discoveries of science usually heralded! Who would have pictured to himself the wonderful results which were to follow the crude experiments of Count Rumford with steam; the watching of the swaying of a set of church lamps by Galileo; Newton's study under the apple tree; or the flying of a Yankee printer's kite upon Boston Common? Yet the world has trembled and swayed under the results of these things, and mankind has felt their influence in every fibre and atom! In my judgment, one of the greatest achievements of modern pathology has been the discovery of the agency of certain lowly-organized monads, micrococci, and microzymes, classed under the head of bacteria, in the production of septicæmia, pyæmia, and the long list of diseases which are their outcome. These atomatic bodies floating in the atmosphere, clinging to sponges and towels, and adhering to instruments and fingers, enter the blood through the open mouths of abraded surfaces. The prevention of the evil consequences of such entrance by the plans of Lister has accomplished a great deal for general surgery. Applied to obstetrics and gynæcological surgery, the same methods are found to be fully as successful.

Progressive obstetricians are now pretty well agreed that the diseases which follow childbirth are due, for the most part, to the introduction of some contagion or poisonous element from without through the open mouths of exposed bloodvessels, laid bare by the parturient process, somewhere between the fundus uteri and the vulva. This theory once being accepted, it follows, as a natural deduction, that every means in the power of the obstetrician should be adopted for the prevention of the introduction of the morbific agents.

Even although the obstetricians of to-day are not prepared to make aseptic midwifery a rule wherever that art is practised, it is highly probable that in the very near future this position will be accepted. Even now this method, in modified form, is exerting a beneficial influence and steadily working its way to adoption in spite of the fact that it entails a great deal of trouble on the practitioner. That it can do no harm is evident. Does any man, can any conscientious obtsetrician, maintain that strict cleanliness and the most scrupulous avoidance, so far as it lies in his power, of all things which can possibly admit of the entrance of the agents which in all probability produce puerperal septicæmia, will do any harm in the lying-in chamber?

Supposing that only one life is saved out of a hundred deliveries, will any one assert that the saving of this one life would not repay him for the trouble which his preventive precautions have cost him? If the whole theory of the bacterial origin of puerperal fever is false, then in a quarter of a century from now all precautionary measures will disappear and the old *régime* will triumph. But if, perchance, this theory is valid and true, then no human power will prevent the realization of the prophecy that aseptic midwifery will be a rule as strict, as inviolable, and as obligatory as the aseptic surgery of amputations and of laparotomy is to-day. Look at the surgery of London, of Paris, of Vienna, and of New York of twenty years ago, with its unclean hands, its fatally dirty instruments, its death-laden sponges, and its foul air, with its terrible mortality, and then look at the surgery of those same cities to-day; and he will be a bold man who dares gainsay the statement that in another quarter of a century no one will venture to rise in a scientific Body and declare that any efforts at perfect cleanliness in the lying-in room are superfluous or absurd.

To free the parturient act from the dangers of septic poisoning, to prevent that scourge, the so-called puerperal fever, suppurative arthritis, pyæmia, embolism, and septic inflammation of the lungs, liver, and other organs, would be to save millions of lives in every generation, and to raise the science of obstetrics to an enviable height.

The germ theory has done more for obstetric medicine than what I have here alluded to. It has revolutionized the treatment of that variety of septicæmia which has been called puerperal fever. No longer do we depend in the treatment of this affection upon quinine, opium, and the application of emollients over the abdomen. By intra-uterine injections the cavity of the uterus is thoroughly and repeatedly washed out with solutions of the bichloride of mercury 1 to 2,000, or with a two and a half per cent. solution of carbolic acid. Surely no one who has experience in the new and the old methods will cavil at my statement that a great improvement has been effected by the former.

Were I called upon to sum up the treatment of a declared undoubted case of puerperal septicæmia, marked by the usual symptoms of pulse of 120, temperature 105° or 106°, which would meet the requirements of our time, I should give it categorically thus :

1. Quiet all pain by morphine hypodermically.
2. Wash out the uterine cavity with antiseptics.
3. Lower the temperature at once below a hundred, not by the barbarous method of the cold bath, but by the far better one of the coil of running water.
4. Feeding the patient upon milk and nothing else, unless some good reason exists for changing it.
5. Exclude from her room all except the nurse and the doctor, keeping her as quiet as possible.

Although the subject of extra-uterine pregnancy has attracted attention from the earlist days of medicine, it is only of late years that it has been carefully studied, its diagnosis put upon a firm basis, and its treatment systematized. Laparotomy, with its wonderfully beneficent results, has been brought to bear upon these cases, before and even after rupture of the vicarious and fœtal nest. By this procedure, Jessup, of England, has succeeded in delivering at full term a child developed in the peritoneal cavity and saving at the same time the mother ; and by it Tait, of the same country, has saved four women after the fœtal sac has ruptured. But it is to the fœticide powers of the electric current, first used by Allen, of Philadelphia, and then by Landis and Reeve, that the safety of such cases can best be trusted. This method is harmless to the mother, even if an incorrect diagnosis is made, and effectual in producing fœtal death if the diagnosis be correct. The number of lives which have already been thus saved is quite large and is daily increasing. And these are lives which in former times would have been sacrificed to inattention, or want of power in diagnosis, or a lack of reliable remedial measures, even if diagnosis were rendered pretty certain.

It must not be supposed that in the olden time no cases of extra-uterine pregnancy were saved. In making my statement I allude only to the systematic management of cases in their early periods, both as to diagnosis and treatment. In this country, even as early as 1759, Dr. John Bard successfully performed gastrotomy for the removal of a full-grown child from the peritoneal cavity. Dr. Baynham did so twice—once in 1791 and again in 1799; and Dr. John King, of Edisto Island, South Carolina, in 1816, cut through the vagina at full term, applied the forceps through the opening, and safely delivered a slave woman of a child which was developed in an abdominal pregnancy. But at that time, and long afterward—until our own time, I may say—the early diagnosis and early treatment of tubal pregnancy were found to be impossible. To-day, given a woman whose symptoms of pregnancy are irregular, who suffers pain in one iliac fossa, who has sudden gushes of blood, and who is subject to occasional attacks of faintness, and every intelligent practitioner would at once examine with reference to the existence of ectopic gestation, and, discovering it, would promptly proceed to destroy the fœtus in its false uterus.

Some one has very pithily said of late that the medicine of a hundred years hence will consist chiefly of prophylaxis and surgery. It appears to me that the statement, which has more than one grain of truth in it, applies with great force to our subject of to-day. The day is, I feel sure, not far distant when preventive measures will be applied with a most triumphant result to placenta prævia, puerperal nephritis, placental apnœa, contracted pelvis, the obstinate, and often fatal, vomiting of pregnancy, and that extreme hydræmia which so often results in thrombosis.

Obstetricians are beginning to question themselves as to whether it is wiser, in the interests of both child and mother, to wait and watch during the last two months of pregnancy until a sudden and furious hæmorrhage makes an issue unavoidable in placenta prævia, a convulsion announces the point of tolerance in puerperal uræmia, or the cessation of fœtal movement tells the tale that the crippled intra-uterine lung has ceased to have power enough to prolong fœtal life. The methods of inducing premature labor are now so simple, so certain, and so void of danger that they, more than at any previous time, present themselves as a sovereign resource in such cases.

And this is more especially true since Tarnier, by his glass-house with heated air regulated so as to meet the feeble heat-making process of the premature infant, renders the perpetuation of the lives of these beings so much more certain than when they were exposed to the chilling draughts of the chamber, and perhaps were at once dipped in water and exhausted by washing and dressing.

How often has every man in this room watched with intense interest and anxiety the following picture: A mother of several children, a beloved wife, and the centre of a large circle dependent upon her for love, for care, and for counsel, about the end of the seventh month develops the symptoms of placenta prævia, or severe puerperal nephritis. The physician cannot conceal from those who surround her the fact that a violent hæmorrhage or sudden convulsive seizure may at any moment destroy life. Should one of these occurrences take place, the patient's friends know full well that it may be hours before medical aid can be obtained in their dire necessity. Day after day the painful process of watching, hoping, dosing goes on; and gradually the symptoms grow worse, until the final issue comes, and great joy is felt if, the child being sacrificed, the mother survives. It is to save all this, at the expense only of exposing the child to the danger of premature birth—a child, too, whose life would be at great hazard even if the pregnancy were allowed to proceed—that premature labor offers itself as a valuable resource.

The obstetric forceps is probably the most life-saving instrument which surgery has ever invented; and from the time of the Chamberlens, about 1647, thousands in every generation have endeavored to improve it, thousands have handed down their names in connection with it by suggesting trivial modifications, and thousands have in their efforts rendered themselves butts for the laughter of their successors by reason of the vanity which guided them. Few, very few, real improvements have been made in these instruments, and these improvements have occurred at long intervals. The Chamberlens used short, straight forceps; Levret and Smellie added length, and gave a pelvic curve to these, and nearly, if not quite, doubled their value; and Tarnier, of France, has, in our day, added a pair of tractors which enable the operator to pull more accurately in coincidence with the superior strait, while the handles are still in the inferior. This is the only real improvement in these instruments since the days of Levret and Smellie, and, like theirs, it marks an era in the history of the instrument, and a mile-stone in its advancing usefulness. There are cases, many cases, in which it is not called for; there are some, and not a few, in which it gives great facility in delivery.

Of late two substitutes have been proposed for the Cæsarean section—extirpation of the gravid uterus and its annexa after delivery of the child from it, or Porro's operation; and delivery of the child above the superior strait of the pelvis by cutting through the abdominal walls and vagina, or laparo-elytrotomy.

R. P. Harris, the only great medical statistician that America has yet produced, reports, in October, 1883, that the combined Porro and Porro-Muller operations saved, out of 116 cases, 48 8-29 per cent. of mothers, and 90 out of a 118 children. Garrigues, in an able and exhaustive essay, reports in the same year that, out of eight operations, laparo-elytrotomy saved half of the mothers and all of the children except two, who died before the operation was undertaken.

In general terms, I think that, to state the comparative success of the two operations, it must be said that the results of laparo-elytrotomy have thus far been superior to those of the Porro-Muller operation, but that for some inexplicable reason the latter has found favor with the Profession, both in this country and in Europe, which the former has failed to obtain.

From my experience with laparo-elytrotomy, I feel certain that, if a fair trial is given to it, it will surely yield a success greater than either the Cæsarean section or the Porro-Muller operation. It is so easy of performance, inflicts so little injury upon important viscera, and has already proved so successful, that I cannot doubt its merits.

We must not conclude that, because the general professional mind is not favorable to an operation which has been little tried, such an operation has "been weighed in the balance and found wanting." The following examples will prove the contrary: In 1834, Gossett, of London, discovered the present operation for vesico-vaginal fistula—position, metal suture, speculum,and all—operated twice, and published his operations. Yet it was left for Marion Sims, in 1852, to rediscover the whole matter.

The greatest advance which has been made in medicine during the present century is the application of clinical thermometry, and its adoption is, as you all know, quite recent. Yet, about one hundred years ago, Curry, of England, fully developed this invaluable contribution to scientific medicine merely to see it pass out of notice and yield no results. And these are by no means the only instances of want of appreciation which can be quoted. I do not, therefore, despair of laparo-elytrotomy, but, from my personal knowledge of its advantages, am very hopeful of its future.

A little over a month ago, Dr. Pilcher, of Brooklyn, having under his charge a case of labor in a deformed woman, aged twenty-one years, in good health, but with a rachitic pelvis, giving in its antero-posterior diameter of the superior strait a measurement of two inches, sent for Dr. Skene to aid him. After she had been in labor eight hours, Dr. Skene, with his well-known skill, performed laparo-elytrotomy, and delivered her of a living child. To-day both mother and child are perfectly well, the after-history of the former being entirely uneventful, the wound healing by first intention, and the patient sitting up on the twenty-first day. It gives me great pleasure to avail myself of Dr. Pilcher's kind permission to report this, as yet unpublished, case to you to-day. And now, in all candor, let me ask you if a procedure which has effected such a result repeatedly, both as regards mother and child, should not be at least fairly tried before it is cast aside among the failures of obstetric surgery?

From the earliest records of medicine in Egypt, of Greece, and of Rome, the practice of gynæcology can be readily traced, and although, like other learning, it became paralyzed by the baneful influence of the dark ages, it was upon the revival of letters at once pursued. Before the middle of the present century, however, it did not in any respect deserve the name of a science. About that time, through two influences—the speculum, which since the days of Récamier had slowly worked its way into use, and anæsthesia, which enabled the surgeon to perform operations, both tedious and painful, upon the genital organs—the science of gynæcology passed in great degree out of the domain of medicine, with its uncertain theories and doubtful resources, into that of surgery. And from that day a new era has existed for this department of medicine which has given it a place among others, not only of respectability, but of dignity.

I know not what view others may take as to the influence which has had so great a result upon gynæcology as all have seen exerted during the past quarter of a century, but, in my judgment, it is the bringing into the service of the department the powerful aid of surgery. Let me beg you to observe that I am not urging the claims of surgery at the expense of those of constitutional treatment in gynæcology. Far from doing this, I am a strong advocate for the great advantage of constitutional treatment of diseases of the pelvic viscera of the female. There is no more clashing between medicine and surgery here than there is elsewhere. They should work together for good, the one sustaining and supplementing the other. Nevertheless, I fearlessly assume the position that an enlightened, conservative surgery is the pivot around which is to revolve the gynæcology of the future, and that, were surgery withdrawn from this department to-day, it would be emasculated of the greatest part of its usefulness and efficiency, and would gradually lapse into the condition which it occupied half a century ago.

Every virtue has a vice which so closely corresponds to it, and so nearly resembles it upon superficial examination, that the real and the false are often confounded. Vanity often simulates modesty; cold policy passes current for charity; even arrogant pride is not rarely mistaken for humility. In medicine, cant, for there is cant in medicine as there is in religion, in politics, and in all other spheres in which the mind of man works, is often mistaken for that most laudable and meritorious of medical qualities, conservatism.

When vaccination was introduced, a great deal of medical cant was talked; and so when the pains of labor were first assuaged by chloroform; when ovarian tumors were submitted to laparotomy, and thousands of valuable lives were yearly saved; and so, also, when the obstetric forceps was put upon its proper basis as an instrument to be resorted to in the interest of mother and child before the symptoms of powerless labor had absolutely developed themselves. When, through the instrumentality of Simpson, Sims and Simon, surgery was introduced into gynæcology, a jeremiade was inaugurated, the echoes of which are only now dying away like the grumblings of a recent storm. Those who practised gynæcological surgery were accused of recklessly mutilating the most beautiful of God's creation. Their conservatism was impeached, their judgment was impugned, their honesty was attacked. And what has been the outcome of the controversy? What is the present status of the moot question? By the aid of gynæcological surgery, thousands of women, who formerly filled beds of suffering throughout their menstrual lives, are now in a month or two restored to perfect health; thousands who were doomed to an early death are saved; thousands who for weary years visited the offices of one, and then another, and still another physician, resisting the powers of general tonics, and nitrate of silver, and potassa fusa, and the actual cautery, are now quickly enabled to perform all the duties of life without exhausting their resources by yearly stipends to the medical man. A woman suffers from profuse leucorrhœa, and backache and difficult locomotion. Formerly she would have gone, times without number, to her doctor's office to have caustics applied to the ulcer of the neck of the womb, until he got tired of her or she of him. Now a lacerated cervix is cured by Emmet's great operation, and a limit is put to her patience and her husband's capacity to bear expense.

A young woman, whose terrible sufferings at menstrual periods have half-crazed her, made her nearly an opium-eater or gin-drinker, and almost transformed her into one of those social vampires who suck the sympathies and vital force of a whole family in place of blood, instead of living on, a libel upon her sex, is cured by Battey's operation and restored to her place in life. Another, who has had the accident of lacerated perinæum inflicted upon her by parturition, instead of passing her life in "ringing the changes" upon all the varieties of pessaries known to art, is cured by perineorrhaphy or colporrhaphy. And still another who, perchance, for twelve years has had an issue of blood, and who has suffered many things of many physicians, and has spent all that she had and was nothing bettered, but rather grown worse, after having exhausted all the hæmostatics and oxytocics and astringents, has a loop of wire, called a curette, carried into the uterine cavity, and fifteen or twenty fungoid growths, about as large as grains of barley, removed, and straightway the fountain of her blood is dried up.

Surely the time is at hand when the gynæcological surgeon may boldly say to his detractors, "Enough of this, the logic of events condemns your futile efforts," and to those in his own department, "he who is not prepared to give his patients the advantages of surgery, either at his own hands or those of another, is not prepared to act honestly and fairly by those who intrust their interests to his keeping."

The pathological conditions which most frequently result in that chain of symptoms which mark the pelvic diseases of women may, I think, be fairly tabulated in the following manner:

1. Injuries received during parturition.
2. Natural and acquired imperfections of the uterus and ovaries.
3. Displacements of the uterus.
4. Benign neoplasms in the uterus, ovaries, or annexa.
5. Tubal and ovarian diseases.
6. Uterine catarrh.
7. Hyperplastic development of the endometrium.
8. Neuroses, such as vaginismus.
9. Inflammatory disease of the pelvic areolar tissue and peritonæum.
10. Malignant disease of the uterus or ovaries.

It may safely be said that in almost all of these a resort to surgical interference is often an essential to cure, while in most of them it is absolutely so.

No surgical procedure has more profoundly excited the interest of gynæcologists during the last decade, and I may add that none has done more good than the operation of trachelorrhaphy. That its future sphere of usefulness is a large and brilliant one no one who has studied its results without prejudice, at the bedside, can for a moment doubt. May its originator long live to enjoy the evidence of the good which his labors have accomplished, and will continue for all time to effect.

Extirpation of the ovaries for three purposes: 1. For effecting a premature menopause; 2. For checking the growth of large fibroids; 3. For removal of ovaries and Fallopian tubes for hydro and pyo-salpinx, and resulting pelvic inflammation—has now become a well-recognized and accepted resource in gynæcology. The originators of these operations, for they really differ from each other in many essential respects, are Battey, Hegar and Tait. So great are the benefits resulting from these procedures in the various conditions for which they are practised that nothing can now stop their advance.

Nevertheless, as I look to-day into the future of any operation for removal of the ovaries, I see in it the instrument of great abuse; I see it performed in numerous cases of mental disorder aggravated by the menstrual molimen in which it will fail of result; in many of uterine disease which could without its aid have been cured by care, patience and skill; and in a great many cases in which diagnosis is obscure, and in which a resort to it is, to say the least, empirical. But I see opening before it, in the future, also a wide, very wide, field of usefulness; I see cases of women, doomed not only to misery themselves, but dooming whole families to life-long discomfort and anxiety, entirely relieved by it; and I see many instances in which without it the curses of opium-eating and dipsomania, which frequently ingraft themselves upon the monthly recurring dysmenorrhœa, lifted by it from moral death to lives of happiness. Are we to reject agents capable of great good because by misdirection they are likewise capable of great evil? No; let us hail the good and apply it to man's wants, and let us strive as best we may to limit and control the evil which we cannot wholly avoid. No one can doubt that numberless evils have attended upon the discovery of gunpowder, yet no one can be blind to the fact that that discovery has done a vast deal for the advancement of civilization and the best good of mankind.

Even as early as the year 1560 Andreas a'Cruce is said to have removed the uterus *per vaginam* for carcinoma uteri, and it is probable that even before his time Soranus had performed this desperate operation, which taxes in our day the skill, boldness, and resources of the surgeon. During the eighteenth century the operation was several times performed, and in 1813 Langenbeck had a successful case. In 1829 Récamier made improvements in it, and in 1878 Czerny revived the operation and placed it upon a firm basis. In 1883 Langer published the following statistics of the procedure:

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|---|---|
| Vaginal extirpation of cancerous uterus | 133 |
| Recoveries | 95 |
| Deaths | 38 |
| Percentage of deaths | 28 |

In 1884, P. F. Mundé published statistics of 256 cases, with a mortality of 24 6-10 per cent.

Freund, in 1878, revived the operation of the removal of the uterus by abdominal section, a procedure put in practice by Gutberlat as early as 1825. Freund's operation has now been performed 106 times, with a result of 72 deaths and 28 recoveries.

Not to detain you longer upon the present status of these two heroic procedures for desperate conditions, I would sum up the matter by the statement that Freund's operation, by reason of the great difficulties and dangers which attend its accomplishment, is now relegated to disuse; while vaginal extirpation of the uterus, although acknowledged to be a procedure of great danger, of undoubted difficulties, and of unquestionable results, has conquered for itself the position of a recognized, legitimate, and even valuable procedure.

An operation which ends fatally in one-quarter of all the cases submitted to it is a procedure of questionable character, of course; but let him who feels disposed to question the justice of the estimate here given remember the terrible future which inevitably attends upon the progress of uterine cancer—the physical suffering, the mental distress, the disgusting concomitant circumstances—and he must admit that any operation which has the power, even at the imminent risk of death, to lessen or remove these, should be hailed as a precious resource!

Uterine extirpation for cancer, however, is one of the most difficult and dangerous of the resources of surgery. As a compromise measure, removal of the entire neck by a conical section extending even up to the fundus uteri, and subsequent closure of the cervical lips by suture, often supersedes it with great advantage.

Deformities of the uterus which alter its shape, impair its nutrition, and interfere with the perviousness of its canal, have long been recognized as grave pathological factors; and even in our day the most sanguine practitioner must admit that their treatment is difficult, uncertain, attended by the dangers of cellulitis and peritonitis, and unsatisfactory to a lamentable degree.

At the present day there are three methods by which uterine deformities—anteflexion, retroflexion, and lateroflexion—are treated: First, the misshapen organ is repeatedly forced into better form by the introduction of the uterine sound, and subsequently it is in a lame, uncertain fashion sustained by a vaginal pessary; second, the tortuous cervical canal is cut at the internal and external os, and a uterine stem is introduced and kept in place by a sustaining vaginal cup; and third, the whole uterine canal is at one sitting distended by a powerful "divulsor," or expanding forceps, to as great an extent as the tissue of the organ will bear. The first two of these methods are well known to you; it is the last I would now bring to your notice.

The heroic nature of this operation, its apparent brutality, and the dangers which one would naturally fear as a consequence of the forcible stretching of uterine tissue, which is really equivalent to absolute tearing of it, has retarded its advance to the position of an accepted operation. Its introducers and chief endorsers have been Priestly, Borck, Ball and Ellinger, all of whom have claimed for it not only excellent results in cases of uterine deformity, but also a very marked immunity from the accidents which one would fear from it. In this city Dr. W. Gill Wylie has reported very favorably of it, and Professor Goodell, of Philadelphia, has recently published a paper upon it, which, with the strong endorsement of his name, will go far toward rendering it popular, and exciting others to a fairer trial of it than it has yet received. Personally, I have no experience of it worth reporting, but I certainly feel it a duty to test the question of its use fully from the evidence which we now have before us.

In connection with my subject I would mention four drugs which have of late been introduced into practice, all of which appear to me to possess sufficient value to warrant their special mention here. These are the permanganate of potash, and the fluid extracts of the stigmata and ustilago maidis of the *Viscum album*, of the *Viburnum opulus* and *Viburnum prunifolium.*

Permanganate of potash, introduced by Sidney Ringer, of London, as an excitant of the menstrual flow, is, I think, the best emmenagogue which has yet been discovered. The stigmata and ustilago maidis, or ergot of corn, are, like the fluid extract of *Viscum album* or mistletoe, excellent oxytocic agents, and replace the ordinary secale cornutum very well, not only during labor, but in causing uterine contraction for the relief of metrorrhagia, uterine fibroids, subinvolution, etc.

The medicinal virtues of the *Viburnum opulus* and *Viburnum prunifolium* appear to consist in an influence of sedative character upon the utero-ovarian nerves. These drugs have been greatly lauded as preventives of threatened abortion, and remedies for the pains which attend disordered menstruation. Although in my experience they have fallen far short of the excellence which has been claimed for them, I feel sure that they possess a considerable degree of virtue.

Although the prolific theme which you have allotted to me, Fellows of the Association, would readily afford me material for a much longer address, the fear of taxing your patience admonishes me of the propriety of bringing my remarks to a close. In doing so, let me beg of you to accept my thanks for the kind attention which you have accorded me—an attention which has given zest to my efforts and rendered my task a pleasure instead of a labor.—*Med. News.*

## BIOGRAPHY.

Dr. Theodore Stout Bell, of Louisville, Kentucky, was found dead in his room, December 28, 1884. He died alone and unattended; surrounded by his books and uncompleted work. What caused his death is unknown.

Dr. Bell was one of the most prominent men as well as one of the most distinguished physicians of his native State, Kentucky. Indeed, his fame should not be confined to his State, but should be, as it will be, acknowledged throughout this country.

He was born in Lexington, Kentucky. His parentage was somewhat obscure, and his early life was spent in comparative illiteracy. As a boy and as a young man, he worked as a tailor, but by native talent, strength of character and generous aid (that chiefly of James Logue) he received a fair education, and successfully attempted to pass through the Medical Department of Transylvania University at Lexington, Kentucky.

He early chose Louisville as his home, and lived a long life there, passing away when he attained the rare and ripe old age of seventy-seven.

The deceased was in very many respects a very remarkable man. His capacity for mental work of the severest and most protracted character was really colossal. He was a great reader; he read industriously, and the books selected were of the most varied character—history, biography, poetry, the drama; general literature, medical literature, biblical literature; botany, geology, archæology; magazines, newspapers, ephemeral literature of but even current interest and importance. His mental craving was omnivorous in character; constant, strong, unceasing, never satisfied.

He wrote a great deal for the medical press, the secular press, the religious press. He was at one time editor of the *Western Journal of Medicine.* He did a great deal for charity; was always kind to the poor, the sick and the afflicted. A great part of his life was devoted to fostering the interests of the blind, and more particularly those of the inmates of the "School of the Blind," at Louisville, Kentucky. His devotion to these unhappy persons was one of daily manifestation: it was constant, generous, sincere.

As a public citizen he was always prominent, useful, energetic. Present at all public meetings, doing hard work on important committees: influential and respected.

Dr. Bell did unobtrusively a large practice among the poor, and it is believed gave most of such work without money and without price.

He filled acceptably the chair of Practice in the University of Louisville. He spoke much and wrote much on the subject of cholera, and more especially on yellow fever. Though his erudition in connection with these subjects was quite conspicuous, his enthusiasm boundless, and his views marked and decided, it cannot be said that he made any impression on the thoughts of his hearers or of the Profession. His fate on these subjects was that of all who have "hobbies" and ride them much and often.

As a diagnostician he was, for a learned physician, not the equal of very many of those greatly his inferiors; while in practical therapeutics he was progressive, liberal and very enterprising.

There were few in this country as well read in past and contemporaneous medicine, and his fondness for pre-historic archæology was conspicuous and even remarkable.

Dr. Bell was during a great part of his life a most conspicuous controversialist. In such work he manifested great activity and impregnable energy. He was often bitter and severe, resorting even to personalities, and to language unusual in the controversial arena. His armamentarium was profusely stocked with weapons and missiles rare and unusual in the warfare of the controversialist, and it sometimes happened, so it is said, that he was driven to use them all. Like that redoubtable American hero in the Mexican war, General Taylor, he never knew, however, when he was beaten, and, if so told, was as sceptical as he had been pugnacious. It should be said, however, that he never retired from such fields as did the Parthians, firing arrows on the retreat, but knew how to withdraw; indeed, he could withdraw with a judgment and decision that were beyond criticism.

It seems remarkable that a man of such great and unquestioned erudition did not make a more conspicuous impression on his time and generation. With the straw that he gathered how many would have piled up brick monumental in height and grandeur! He was capable of doing this, but somehow, unfortunately, he worked in too many fields to reap a conspicuous harvest in any one of them. He deserved well of his generation, and whatever may be the encomiums it shall render, the just will say that he was worthy of them all.

Even those who were not permitted to be the intimates of Dr. Bell must feel sad over the end of such a life; over the lonely termination of a life so strong, so useful, so worthy, so admirable; this sad, almost mysterious passing away of a rugged, lonely, strong and genuine man. How like his last days to those of Carlyle: secluded, sad, yet laborious, independent, useful. The last day, the last hours, spent in work; and when the golden bowl was broken, it was as ever beside the fountain where it had so often been filled to overflowing. Where else should the mental laborer wish to die, if not amid the silent companions of his life-work? A lonely, solitary death; but an eloquent death, for it declares the choice and the character of a well-spent life!

WILLIAM DARLING, M.D.—Four hours after the advent of Christmas Day a physician, whose name is prominent among the Profession throughout the United States and England, died at the University Medical College of this city. Dr. William Darling, who has been described as "a piece of the first half of this century translated into the second half," breathed his last surrounded by anatomical specimens, and nine hours before his death, when in a condition of delirium, he delivered a complete lecture on anatomy which was perfectly coherent. Such a weird deathbed scene, said his physician, has rarely been witnessed.

Dr. Darling took a severe cold Thursday (18th), and on Friday he alleged that he fell down and injured himself. He was examined by Dr. Spitzka, who found three superficial scalp abrasions. He was unable to explain how he reached his home. On Monday Dr. Polk visited the sick man, who, however, in his dislike of medical treatment, did not explain his case. Later on, however, he wrote to Dr. Spitzka, who attended him immediately. Dr. Darling strenuously resisted treatment, and even declined to have a nurse. One of the employés of the college was therefore assigned to watch him. He rallied on Tuesday (23d), and it was thought that his rugged constitution would get the better of his malady, but on Wednesday there was a change for the worse, and on the 24th Dr. Darling expired painlessly.

Dr. Darling was born at Dunse, Scotland, 82 years ago, his birthplace being close to that of the poet Burns. He came to America about the year 1830, and began the study of medicine in the medical university in which he had long been a professor and in which he died. Dr. Darling was so thorough an enthusiast in the profession which he selected that, instead of being graduated at the time when it was his due, he continued to study many years beyond the time required. During this period, however, he began to teach anatomy, thereby supporting himself and accumulating money. In 1842 he was graduated and had saved enough money to enable him to go to England, where he continued his work. His object was to obtain a fellowship in the Royal College of Surgeons, which required a ten years' course of study. When Dr. Darling was introduced to the College of Surgeons by a letter, the professors there said that as he came up for his examination he impressed them as being rather an uncouth young fellow, and a decided provincial. But before the examination had been concluded the professors said that the tables were turned, and they found he was examining them. He obtained his fellowship in due time, being a studen with Prof. Huxley. A fellowship in the Royal College of Surgeons is rare among physicians in this country, there being only two other cases on record.

When Dr. Darling returned to America, which was about 1862, he found that the collection of anatomical specimens which he had made before he went to England had been appropriated as the nucleus of an anatomical museum which is now the only one in New York which could rival his own. Soon after his return Dr. Patteson, professor at the University Medical College, was taken ill. Dr. Darling was then conducting what is technically known as the "quiz" class, and was called upon to lecture in the place of Dr. Patteson. The illness of that physician continuing, Dr. Darling took his place as professor, and has maintained it for the last 20 years, though for upward of 50 years he has taught anatomy.

Dr. Darling had a number of personal peculiarities which stamped him as a man of original character. He was an enthusiastic anatomist, and an unusual shape in a bone or in the form of a skull would—to quote Dr. Spitzka—"delight him more than the discovery of the lost books of Tacitus would rejoice a German antiquarian." He had the largest collection of rare specimens of bones of any one man in this country, if not in all countries.

"The spectacle of the old surgeon, with his oilskin cap and apron," said Dr. Spitzka, "with which he has been inseparably associated, is probably one of the most vivid pictures in the recollections of his contemporaries." Dr. Darling was not a "dry" teacher of anatomical facts, but having a thorough knowledge of Greek and Latin, and being able to recite by heart the English classics from Chaucer to Tennyson, he brought these advantages into the classroom with beneficial effect. It was said that no one could quote a line of standard English poetry to Dr. Darling and find him unable to reproduce the entire passage. "I attribute my ability to commit works to memory," he used to say, "to my Presbyterian training in Scotland. I was obliged, when I returned from kirk, to repeat the sermon to my father, and if I couldn't do it the occasion was not a pleasant one for me."

Dr. Darling is known to have been the author of many anonymous poems, his bashfulness prompting the withholding of his signature. When he was in London a twisted paper was found in the cavity of a young girl's skull—one of his specimens. The twisted paper was discovered to be a poem of such beauty that a reward of £50 was offered for the name of the author—without success. Dr. Darling was much sought after in social circles, particularly among the Caledonians. He was a profound mathematician, and used to astound people by propounding bewildering problems in Euclid and algebra. Dr. Darling was always generous and warm hearted. Dr. Darling never practised medicine privately. He was at one time associated with Dr. Valentine Mott, was also Surgeon at Quarantine and at the Emigrant's Asylum on Ward's Island. He himself was as much a student in later as in earlier years.

Dr. Darling was elected senior member of the Medico-chirurgical Society of Philadelphia. In 1868 he was appointed Censor of the New York College of Veterinary Surgery. In 1873 he was chosen Professor of Anatomy in the University of Vermont. In 1877 the Rhode Island Medical Society elected him an honorary member, and in the same year he was appointed foreign correspondent of the Société d'Anthropologie of Paris. He lived quietly and unostentatiously at the University Medical College with his anatomical specimens. He was always cheerful and light-hearted, and the number of his friends among the Profession was legion. It was not until after his death that it was ascertained that he had a sister and nephew living at Yonkers. From that city his funeral took place. Dr. Darling wrote only two works, "A Small Compend of Anatomy" and "Essentials of Anatomy," which latter work was the subject of very familiar litigation.

Dr. Henry Gibbons.—Dr. Gibbons was born in Wilmington, Del., September 20, 1808. His father, Dr. William Gibbons, was a physician of Wilmington, having resided there during almost the whole of his professional life, and having been distinguished not only in his profession, but also by his interest in science generally, in fruit culture, and in his relations to the Society of Friends, of which he was a member. Dr. Henry Gibbons was graduated in medicine by the University of Pennsylvania in the year 1829, and immediately afterward opened an office for the practice of his profession in Wilmington. His talents and associations brought him speedily into a large practice, in which he attained an eminent position. Following in the footsteps of his father, he cultivated the sciences collateral to medicine, and frequently delivered popular lectures on these subjects, his purpose being to instruct the community in matters not only interesting, but useful and elevating. During his residence in that city he originated and published for several years a scientific journal, which was conducted with his usual ability. He was also deeply interested in the temperance cause, and was one of its most ardent and fearless exponents; indeed, to such an extent as at length materially to damage his professional business. About the year 1844 he was invited by a medical friend to engage in practice in Philadelphia, where he remained for six years, when, influenced by the prevailing impulse of the period, he, in 1850, removed to San Francisco, where he continued to reside. In that city he took a prominent position socially and professionally. He became one of the founders of the Medical College of the Pacific, in which he filled the chair of the Practice of Medicine and Clinical Medicine, and so continued during his life. He also established and conducted with marked ability the *Pacific Medical and Surgical Journal*, lately in conjunction with his son, Dr. Henry Gibbons, Jr., thus affording a convenient mode of disseminating not only his own opinions in regard to the diseases of San Francisco and the peculiarities of the climate of the Pacific Coast, but also the views of other physicians of California, by this means bringing to the knowledge of the medical world much information on those subjects. Possessed of a retentive memory, a discriminating judgment, a fluent and interesting address, and being a facile and attractive writer, he became prominent in all assemblies with which he was connected, and held the respect and confidence of his professional brethren in the city of his adoption as he had done in his native place. He was a member of the Society of Friends by birth, and maintained his connection with it throughout his life. Until very recently he had addressed that society several times in their assemblies. His late visit was to the old homestead, now in possession of Henry L. Tatnall, his brother-in-law; and while there he enjoyed the visits and associations of his former friends and of his relatives who resided in the East, with whom, with mind and memory still clear, he delighted to recall many incidents of his youth and early professional life. Age, however, and intense and active application to his profession, as well as the constant use of his pen, left deep traces upon his physical forces; and his sister, in whom he found all the devotion of a mother, saw his energies rapidly wasting, his appetite failing, and the premonitions of the end of life strongly marked. On November 5th he passed away quietly, in the old home of his parents, where his boyhood days were passed, and where, no doubt, he preferred, of all other places on the earth, to close his eyes in death. Both in his profession and in the advocacy of the moral reforms of his day, his life evinced a noble devotion to the welfare of his fellow-men.

James G. Thomas, M.D.—Dr. Thomas was born in Kentucky in 1835, and died in December, 1884, in Washington, D. C. Dr. Thomas graduated at the University of New York in 1856. He was a surgeon in the Confederate Army, at one time Medical Director of Hardie's Corps. He was one of the first contributors on "The Use of the Thermometer in the Practice of Medicine" in this country, and his last considerable contribution was on *Dengue.* His death was very sincerely deprecated, particularly by his colleagues in sanitary work.

The following circular was issued by the Executive Committee of the Ninth International Congress:

"NINTH INTERNATIONAL CONGRESS.

"The Executive Committee announce, with great sorrow, the death of Dr. James G. Thomas, of Savannah, one of the members of the General Committee of Organization.

"Dr. Thomas took a deep interest in the success of the congress, and, at a considerable sacrifice, came to Washington, November 29th, to attend the meeting of organization. While on the way he was seized with a violent chill, and on his arrival at once took to his bed, from which he never again arose, the disease proving to be acute lobar pneumonia. He may be said to have lost his life in the service of the congress, and it is an irreparable loss to us, as well as to his bereaved family and his fellow-citizens of Savannah and of Georgia.

"Washington, D. C., December 8, 1884."

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Treatment of Leg Ulcers.—Dr. Roberts has recently had excellent results in chronic ulcers of the legs, after sprinkling powdered chloride of sodium thickly over the surface of the ulcer, once every three or four days, and dressing the sores twice daily with corrosive sublimate ointment. The ointment contains half a grain of the mercuric chloride to the ounce of cerate. Chronic ulcers with callous edges are often most expeditiously treated by the surgeon excising them by means of an elliptical incision, and closing the wound with sutures.—*Polyclinic.*

# ORIGINAL CORRESPONDENCE.

15 Rue Caumartin, Paris, December, 1884.

*To the Editor of Gaillard's Medical Journal:*

Dear Doctor: Dr. Noel Guineau de Mussy has just presented to the Profession a new work on typhoid fever, which is undoubtedly an able and exhaustive one.

Although he has not produced anything original in substance-matter, he has classified established facts in so simple and philosophical a manner, and has displayed such sound judgment in eliminating truth from error—reliable data from speculative hypotheses—as to render a trite subject exceedingly interesting and attractive.

Having had a large experience with the disease, both in hospital and private practice, he has made each case a special study, so that nothing has escaped his observation in the field, either of its etiology, clinical history, or therapeutics. His work is, in fact, an encyclopædia, so far as typhoid fever is concerned: a résumé, and a condensation of all that is known respecting the disease; while it shows an acuteness of observation, a fidelity of research and a power of analysis, which stamp its author at once as a great physician, and a real philosopher.

Few such books have been produced in France within the last decade, and it is destined not only to take a place among the classics of French medical literature, but in a measure to revive the influence of his country in the world of medicine.

There is no denying the fact that French medicine has suffered a decadence of late—that the surgeons and physicians of France have ceased to be the *avant-couriers* of the profession as they were in other days, and that in the progress of events they have been relegated from the position of pioneers to that of followers—if not stragglers—in the march of medicine.

The cause of this retrogression is as apparent as the fact itself. The whirlpool of politics has drawn into its fatal currents the intellect of the nation, with the result of a loss of its prestige throughout the entire domain of science. Absorbed in the fate of dynasties, the struggles of cabinets and the disputes of contending factions, the successors of Andral, Velpeau, Bichat, Trousseau, Nélaton, *et id genus omne*, have inherited their positions, but have not displayed their genius, nor acquired their renown, and the glory of the French schools has died with their great masters. Hence it is that the crowds of anxious students, which each succeeding year brought from every portion of the civilized globe to Paris, now seek other and purer fountains of medical knowledge. Hence it is that the authority which once attached itself to the authors and teachers of France has dwindled into nothingness, and become only a matter of memory and tradition. And hence it is that such a work as that which Dr. de Mussy has presented to the profession—a production at once profoundly scientific and pre-eminently scholarly—is as opportune in its advent as it is valuable in itself, since it serves to recall and to re-establish the departed prestige of French medicine.

I do not desire to convey the impression that there are not great medical men in France or that French books are not read or appreciated. I simply mean to speak of the Profession, and of its labors, *en bloc*, to portray its general status at the present moment as compared with that of its past history.

Born in 1813 of an illustrious family—his grandfather having been a member of the Institute and the physician of Napoleon the I., and his father a cousin of Buffon—he became an interne to Velpeau in 1839, was chosen Chef de Clinique by Chomel in the succeeding year, gained the grade of Médecin des Hopitaux by concours in 1842, and was elected Professeur Agrégé in 1847. Declining to become an applicant for the position of Professeur Titulaire after the abolition of the concours, he has devoted himself to public teaching in the hospitals of Paris for twenty years, and has always been regarded as one of the ablest teachers in France. He has been a prolific author, having produced many works of recognized value, notably his "Angine Grandulaire," which was introduced many years ago to the American Profession by Horace Green, and his "Etudes Cliniques," which has acquired a great reputation, especially on account of the valuable information which they contain respecting the diagnosis of diseases of the chest. He has also distinguished himself by his clinical demonstrations of the spontaneity and the communicability of tuberculosis, his indications of the signs of diaphragmatic pleurisy, his diagnosis of tracheo-bronchial adenitis—a disease which had always been confounded with tuberculosis, and pronounced imaginary by Andral—and his investigations of the clinical history of the diseases affecting *le tegument interne*, having relations with the same diathesis as cutaneous affections. In fact, the history of La Charité, La Pitié and L'Hotel Dieu, for the last thirty years is but a record of the labors and triumphs of this indefatigable disciple of science.

I have met with no one abroad who has seemed so appreciative of American physicians, or so thoroughly posted in regard to their contributions to medicine, as Dr. de Mussy; and it is really delightful to listen to the enthusiastic terms in which he speaks of his old friends and comrades Van Buren, Pope and Bigelow. Tall of stature, graceful in carriage, with a massive brow, a gentle gray eye, cleanly-cut features and a singularly amiable expression of countenance, the least skilful reader of human character would select him at a single glance as a good and great man. He is, in fact, the very type of a gentleman—suave, dignified, gentle, brave and steadfast to the last degree, and under all circumstances. It is said that he never had an enemy—that calumny has always recognized him as a mark too high for its shafts, and jealousy has invariably transformed itself into admiration under his ingenuous nature.

As a consultant he is admirable. Instead of endeavoring to produce an impression upon the patient or surrounding friends by immediately suggesting a new disease or some untried method of treatment, he invariably seeks to strengthen the hands of the attending physician by commending and continuing the original treatment, if it be possible to do so without detriment to the sufferer. At the same time, he never fails to speak *in private* with absolute candor to his *confrère*, and always with the result of throwing a flood of light upon the case, both as regards the interpretation of its symptoms and employment of means for its treatment. Unlike most of his compatriots, he keeps himself *au courant* with the progress of medicine beyond the limits of France, and hence it is that he is so eagerly sought after by physicians of other nationalities in cases of difficulty and embarrassment.

In striking contrast with Dr. Mussy's department as a consultant was the conduct of another physician, a celebrity in his special department, with whom I once had a consultation in Paris. So soon as he reached the patient's bedside, he proceeded to question and examine him, to make his diagnosis, and to explain it in the presence of the entire family, to prescribe as he thought proper, and then to bow himself out of the room, with the announcement that he would return at a certain hour on the succeeding day, all without conferring with me, or even recognizing my existence. He soon found, however, that he had made a mistake in attempting so unpardonable a discourtesy, for, placing myself between him and the door, I stopped him in mid career, expressed my opinion of him in the most emphatic English at my command, and informed him that his services were no longer required. Then, turning to the family, I called attention to his violation of the rules of professional courtesy, as well as of common decency, and proposed to compromise matters with them by sending for Dr. Charcot, a personal friend and a thorough gentleman, as the disease was in the line of his specialty.

Indeed, it is the general rule here for the consulting physician to discuss the case with the sick man, and his family, to express his opinion in regard to the nature of the malady, and the appropriateness of the remedies already employed, and to suggest some different method of treatment, as a matter of course, and without regard to the feelings, or to the interests of the physician in charge.

They do things differently in Egypt, as I will illustrate by relating the history of the first consultation to which I was called in that country.

Shortly after my arrival at Cairo, I received an order from the Minister of War to repair to the house of the assistant Minister, for the purpose of consulting with some other physicians in regard to his case, which was reported to be a complicated and a difficult one.

On reaching the house, I found assembled in the little garden attached to it about a dozen medical men of all nationalities and types, including the Chief Surgeon of the War Department, and a native barber and leecher, each of whom had received a mandate similar to mine. After many compliments, much handshaking, and a cup of coffee around, we entered the room of the sick man, and proceeded to make an examination of his case. We then returned to the little garden, and after another cup of coffee had been served, and the Mahomedan portion of the conclave had said their prayers *pro forma*, the consultation began. This consisted in a long discourse from each of the doctors present—beginning with the youngest—in which he paraded all the medical knowledge he possessed, and scarcely touched upon the case at all, until at the conclusion of his discourse, when the opinion was expressed that the patient was paralyzed, and should be given calomel, and freely blistered. When it came to my turn to hold forth, I declined to express an opinion until I had heard from all, putting it upon the ground of politeness, and said nothing until the rest had spoken. I then informed them, that the Pasha was not suffering from paralysis, but from muscular rheumatism, combined with great prostration, the result of a daily purgation for more than two weeks, and of a persistent course of starvation, as nothing save vegetable broth had been given him for the same length of time. I also insisted that the main indication of the moment was to feed and strengthen him, and that, afterwards, the iodide of potash, in some bitter infusion, should be given. "Not paralyzed!" they cried out together. "He cannot move a limb." "Feed him? You will murder him in the attempt." "Well," said I, "let us examine him again so as to determine this question of paralysis;" and returning to the room, I succeeded, after much persuasion, in inducing the starving and prostrated man to move his limbs by a voluntary effort.

They gazed with astonishment upon the scene, conferred together in their own language briefly, and then, turning to me, said through their spokesman: "You are right. Your directions shall be strictly followed. Meet us to-morrow, at the same hour, for another consultation."

Proud of my success in converting them to a proper view of the case, and delighted with the show of civility and fraternity on their part, I went on my way, filled with kind feelings towards my *confrères*, and duly appreciative of the professional courtesy existing among the medical men of Cairo.

On the succeeding day I presented myself at the house of the Pasha, according to agreement, but only to find it completely deserted, and to discover that the apparent concession and the polite invitation of the first consultation were only a *ruse* to gain time enough to have the patient carried to a distant part of the city, and concealed there so as to effectually get rid of me, and to keep him from being killed by the measures which I had suggested for his relief. It was in vain that I complained to the Minister of War, for my colleagues had forestalled me by seeing him in advance and convincing him that the radical expedient which they had adopted was necessitated by my obstinate advocacy of a plan of treatment which would have eventuated in the inevitable death of his assistant.

As a part of the *res gestæ*, I must add, that two weeks afterwards I visited the patient again, under a peremptory order from the War Department—as I had in the meantime saved the life of the Minister himself by a surgical operation, and thereby gained his confidence—and that having made it a condition precedent of my attendance that none of the original consultants should enter the house, I did succeed in restoring him to health by instituting the plan of treatment first proposed.

I regret to record that a sad fate awaited one of the principal actors in this little comedy—Dr. Mehemet Ali Pasha, then the Professor of Surgery in the Medical School of Cairo.

Shortly after my resignation the Khédive declared war against Abyssinia, and sent this professor with the invading army as its medical Director. The army was defeated, and almost annihilated, at Guera, and the medical Director was captured and sent into the interior, under the guidance of a soldier, who, becoming weary of his charge, deliberately murdered him—a fate which would assuredly have been mine had the condition of my eyes permitted me to remain in Egypt.

I found that the Egyptians have more confidence in the efficacy of faith than of medicine in the treatment of disease. They believe that certain religious sheiks have the power of curing diseases by blowing their breath upon the region of the heart of the afflicted, and crowds of invalids flock regularly to the morgues to be thus cured of their maladies.

They also believe that cures can be effected in the most desperate cases by writing prayers, and quotations from the Koran, upon slips of paper, and then dissolving them in the water to be drunk by the sick; and I heard a very good story apropos of this fanatical mode of medication.

It seemed that a foreign physician was called on to prescribe for an afflicted Arab, and that, having nothing better at command, he wrote his prescription upon a piece of brown wrapping paper. Meeting his patient some time afterwards, he inquired after his health, and respecting the action of the prescription. "Allah be praised," said the devout Musselman, "I escaped with my life, but the prescription would not dissolve, and I like to have died of colic after taking it;" for, true to the habitudes of his country, he had macerated the paper in water and swallowed it.

I have lingered so long over my Egyptian reminiscences as to preclude the possibility of referring to the matters Parisian which I started out to write about, and you must permit me to postpone them until the next occasion.

I am very truly yours, etc.,

Edward Warren (Bey), M.D., LL.D.

# LECTURES.

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Lecture on Reflex Uterine Vomiting. Delivered at University College Hospital. By Graily Hewitt, M.D., F.R.C.P., Professor of Midwifery University College, Obstetric Physician to the Hospital.

Gentlemen: It is my intention to bring before your notice to-day certain cases at present in the ward which illustrate, in a very complete manner, some of the various phases of an affection very common in gynæcological practice—reflex uterine vomiting. Of the various symptoms or complaints which come under the notice of the gynæcologist, reflex uterine vomiting is one of the most common. It is also very important, and that principally for two reasons: (1) On account of the distress the symptom itself produces, and (2) because it interferes so considerably with the process of nutrition, one of the effects of chronic vomiting being necessarily a slow starvation. I propose to submit to your notice the particulars of three cases now in the ward, the notes of which have been prepared and arranged by the late obstetric assistant, Mr. A. H. Mason.

Case 1.—M. H——, single, aged twenty-seven, admitted into hospital Oct. 4th, 1883.—History: The illness dates from nine years ago, beginning with pain in the lower part of the abdomen at each monthly period. At first the catamenia appeared between the age of fifteen and sixteen, and were regular and painless for two years. Then pain began, and coincidentally the period became irregular, the patient going five, six or seven weeks. At the end of two years, when she was aged twenty, the pain became very severe, lasting the whole period (three days), and the flow became scanty. Then vomiting set in, at first in the morning before breakfast, and accompanied by severe headache, at the period; it rarely took place in the intermenstrual period. This lasted till four years ago, when vomiting began to take place independently of the menstrual epoch, occurring any time in the day, but usually in the morning, accompanied by severe pain in the epigastrium, which was increased by food but relieved by vomiting. No hæmatemesis at any time. The patient gradually lost flesh and strength, and was unfitted for any employment. She had been in hospital twice before, in April, 1882, and in November, 1882. Each time she was relieved by treatment, but relapsed shortly after going out. At the age of sixteen she went into service, and her first situation was a very hard one. There was a great deal of scrubbing to do and carrying heavy weights, etc. She remained in service six years, and then found it was too much for her; so she took to dressmaking, and worked hard at a sewing machine. As a child her food was not good. She had pleurisy four years ago. Examination of the uterus four days after admission, as follows: Patient wearing a ring pessary. This was removed, and the uterus found to be retroflexed, with the middle portion much atrophied. Sound enters normal length; great difficulty in introduction. A Hodge pessary, made from ring three inches in diameter, inserted. She was ordered the prone position, with knee-elbow position six or seven times a day, and a draught composed of five minims of nux vomica, one minim of tincture of capsicum, half a drachm of sulphate of magnesia, and two minims of dilute hydrocyanic acid, to an ounce of chloroform water, three times a day. Improvement soon began under this treatment. The headache was the first thing to disappear, then the abdominal pain. The latter has, however, returned again slightly. The sickness became less, and finally was limited to once in the evening, about seven o'clock, for a long time. The patient was then ordered to take tea at 4.30 P.M., and nothing more till 10 or 11 P.M., when she had a meat sandwich. Under this regimen the vomiting has been completely subdued. When this patient first came under notice she was in a most miserable condition from the pain and starvation together. The uterus was in a very atonic and weak state. The retroflexion present was treated by a Hodge pessary. After some time it was found that the uterus had become anteflexed. Then it was left to itself for a time, but the anteflexion remained. On the second occasion of her leaving the hospital a simple ring pessary was introduced. This had, however, proved inefficient, and the retroflexion (the primary affection) was found to have returned. This case is an instance of a condition, not very uncommon, where the uterus is in a state of very great feebleness, and entirely wanting in ordinary tonicity and firmness. It is at the mercy of the action of gravity, and when held in position for a time is liable to fall over in the opposite direction. The enfeeblement of the uterus is due to the long-continued chronic starvation from which this patient had suffered so much, and for this the chronic vomiting is responsible.

CASE 2.—S. A. N——, married, aged forty, mother of five children, the last born three and a half years ago, was admitted on October 24th. The patient complains of pain at the bottom of the abdomen, like intense cold, also of difficulty of micturition. Illness began with sudden pain on and difficulty of micturition three years ago (Nov. 1880). At that time she had been engaged in heavy housework, scrubbing of floors, etc. This was succeeded by a feeling of nausea, but no actual vomiting. For the last six months the patient has been laid up completely with these symptoms, which have increased in severity. There has been vomiting of a watery fluid mixed with bile every morning. There has also been menorrhagia with increasingly shorter intervals between the epochs—six or seven days to three weeks—clots frequently passed. There is excessive frequency of micturition. On examination the uterus is retroflexed with posterior rotation. The os is slightly more patent than natural, admitting tip of finger. The posterior lip is swollen. Sound enters two and a half inches. Flexion easily reduced, but causes some pain. Mucous discharge from cervix. To have knee-elbow position seven or eight times a day, prone position at all times. After ten days of this treatment a Hodge pessary prepared from a three-inch ring was inserted. Patient has not vomited since admission, and the bladder trouble has been less till quite recently (Nov. 14th), when there has been again increased frequency of micturition with pain in the abdomen. The examination of the urine gave negative results. This patient seems to have enjoyed fairly good health until her last confinement. It appears that the illness dates from over-exertion subsequent to that time. On admission her condition was one of entire incapacity for ordinary exertion and the care of her home and family. The sickness was not the most important symptom in this case, nor was it very severe, but it is noticeable that it occurred coincidentally with other symptoms, resulting from the displacement with which the patient was found to be affected. The sickness had of late become worse, and no doubt would have attained still greater severity had the affection remained untreated. And it is further observable that it disappeared as soon as treatment was commenced.

Case 3.—E. C——, servant, aged twenty-eight, admitted on Sept. 4th, 1883. The patient has been in hospital three times before for retroflexion associated with pelvic hæmatocele. She complains of pain in both ovarian regions, vomiting, and irregularity of menstruation, the periods usually somewhat profuse, and coming on sometimes at intervals of two months, sometimes every fortnight. Illness dates from several years back, but the patient is unable to fix an exact date; began with vomiting, which seemed to be traced to lifting heavy weights. The vomiting originally bore no relation to food, occurring at any time during the day. For the last two months it has occurred from five to ten minutes after taking food; began with a copious flow of frothy fluid, of acid taste, followed by ejections of food. The vomiting is not worse during a menstrual epoch. Uterus found retroflexed sharply, and directed to the left side (fundus); reduction by sound painful; right ovary prolapsed and tender. A Hodge pessary, two inches and a half ring, was inserted, which was shortly replaced by a larger one, and eventually by a No. 3 Greenhalgh, with padded posterior bar. Up to the present time very little benefit has been experienced as regards the vomiting, but the uterus is straighter and the right ovary out of reach. This case is one in which the symptoms are very severe, and in which the cure is difficult. The patient has apparently a good constitution, and the sickness has not been before so persistent or troublesome as it has proved to be on this occasion. On a former occasion there was hæmatocele, but when the patient left the hospital the uterus was then being kept in place by a pessary, and the retroflexion was amenable to its action. Some time after leaving the hospital the pessary was removed, and there has been a rapid return of the unfavorable symptoms. The uterus was found much retroflexed, and the right ovary even lower than the fundus uteri and somewhat swollen. In this case, no doubt, the displacement of the ovary is in part responsible for the sickness. With the object of more completely pushing the ovary into its place a rather large padded pessary is being used, and it would seem that temporarily this has had the effect of increasing the sickness, though ultimately the benefit derived will, it is considered, compensate for this. The chronicity of the case is accounted for by the displacement having for some years, probably, escaped recognition, and since treatment has been applied it has, owing to the patient not being continuously and sufficiently long under observation, not as yet cured the disorder.

In such a case as this a cure cannot be obtained unless the uterus is continuously treated. Two or three months' absence of treatment is sufficient, as has been shown in this case, to undo the good previously derived, and it is most unsatisfactory to have, as we now find it necessary, to begin almost *de novo.*

According to my experience reflex uterine vomiting, when of an obstinate character, is very frequently associated with great weakness and want of tonicity of the uterus, and a flexed condition of the organ is almost invariably also present. There are, undoubtedly, cases of reflex uterine vomiting in which the cause is a different one, but they are exceptional, and occur rarely. The unduly soft uterus readily bends, and any temporary increase in the degree of the flexion is attended with aggravation of the reflex disturbance. viz., the vomiting. This is a fact with which observation of many cases has made me acquainted. The several factors concerned in the production of this grave disorder may be enumerated as follows: 1. A general enfeeblement of the body, the result of a low condition of the nutritive process in which the uterus participates. 2. The physical weakness and pliability with which the uterus is consequently affected. 3. The flexed condition of the uterus, liable to be intensified by certain movements or positions of the patient. The sickness and vomiting appear to result from the irritation of the uterine nerves, consequent on the temporary or permanent compression of the uterine tissues. It is almost certainly relieved, or for the time, at all events, removed, by measures having for their object the maintenance of the uterus in a normal position and shape. In two of the three cases above related, immediate relief was obtained from the treatment. The third is a case in which the condition of the ovary introduces a complication and increases the difficulty.

On the diagnosis of reflex uterine vomiting I may, in conclusion, add a few remarks. There is no doubt that many cases of this affection escape true recognition, the sickness being erroneously attributed to the liver or the stomach being the seat of the disease. Many cases of so-called "bilious" vomiting, and not a few of supposed gastric ulcer, turn out, on investigation, to be cases of uterine vomiting pure and simple. As regards the liver and the stomach, it will be found possible to exclude these organs as causes of the vomiting, from the fact that apart from the vomiting there is no other symptom indicative of disease of the organs in question; while, on the other hand, there are generally marked symptoms indicating that the uterine functions are disturbed. One symptom specially indicative of the uterus as the cause of the sickness is the exaggeration of the sickness, which is liable to occur when the patient moves or walks or exercises herself. It must be added, also, that in cases of reflex uterine vomiting, where the malady has been of long continuance, the stomach itself is liable to become affected. The secreting power of the stomach is enfeebled by the long-continued starvation; and it is no longer capable of producing gastric juice to any amount, which adds another factor to the pathology of such cases. Hence a quasi-paralysis of the gastric mucous membrane; and I have seen cases of this kind in which the extremest care was necessary to prevent a fatal issue, even after the tendency to vomit had been obviated or diminished by appropriate treatment.—*Brit. Med. Jour.*

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## PROCEEDINGS OF SOCIETIES.

[NOTE.—The weekly medical journals very properly publish the proceedings of societies as soon as the societies adjourn. This journal being a monthly cannot, of course, do this; it will publish, therefore, only such carefully obtained proceedings of American and European Societies as are most interesting and instructive.—ED.]

### COMMITTEE ON ORGANIZATION OF THE NINTH INTERNATIONAL MEDICAL CONGRESS, to be held in Washington, D. C., in 1887.

#### PRELIMINARY NOTICE.

The Committee on Organization of the Ninth International Medical Congress, to be held in the United States in 1887, met at Washington, D. C., on November 29, 1884, for the determination of the general plan of the congress, the election of officers of the committee, who will be nominated to fill the same offices in the congress, and the consideration of questions of finance.

The following rules were adopted:

1. The congress will be composed of members of the regular medical profession who shall have inscribed their names on the register of the congress, and shall have taken out their tickets of admission. As regards foreign members, the above conditions are the only ones which it seems, at present, expedient to impose.

The American members of the congress shall be appointed by the American Medical Association, by regularly organized State and local medical societies, and also by such general organizations relating to special departments and purposes as the American Academy of Medicine, the American Surgical Association, the American Gynæcological, Ophthalmological, Otological, Laryngological, Neurological and Dermatological Societies, and the American Public Health Association; each of the foregoing societies being entitled to appoint one delegate for every ten of their membership.

The members of all special and subordinate committees, appointed by the general committee, shall also be entitled to membership in the congress, together with such other persons as may be specially designated by the executive committee.

All societies entitled to representation are requested to elect their delegates at their last regular meeting preceding the meeting of the congress, and to furnish the secretary-general with a certified list of the delegates so appointed.

2. The work of the congress is divided into eighteen sections, as follows, viz.:

1. Medical Education, Legislation and Registration, including methods of teaching and buildings, apparatus, etc., connected therewith.
2. Anatomy.
3. Physiology.
4. Pathology.
5. Medicine.
6. Surgery.
7. Obstetrics.
8. Gynæcology.
9. Ophthalmology.
10. Otology.
11. Dermatology and Syphilis.
12. Nervous Diseases and Psychiatry.
13. Laryngology.
14. Public and International Hygiene.
15. Collective Investigation, Nomenclature and Vital Statistics.
16. Military and Naval Surgery and Medicine.
17. Experimental Therapeutics and Pharmacology.
18. Diseases of Children.

3. The general meetings will be reserved for the transaction of the general business of the congress and for addresses or communications of scientific interest more general than those given in the sections.

4. Questions which have been agreed upon for discussion in the sections shall be introduced by members previously nominated by the officers of the section. The members who open discussions shall present a statement of the conclusions which they have formed as a basis for debate.

5. Notices of papers to be read in any one of the sections, together with abstracts of the same, must be sent to the secretary of that section before April 30, 1887. These abstracts will be regarded as strictly confidential communications, and will not be published until the meeting of the congress. Papers relating to questions not included in the list of subjects suggested by the officers of the various sections will be received. Any member, after April 30, wishing to bring forward a subject not upon the programme, must give notice of his intention to the secretary-general at least twenty-one days before the opening of the congress. The officers of each section shall decide as to the acceptance of any communication offered to their section, and shall fix the time of its presentation. No communication will be received which has been already published, or read before a society.

6. All addresses and papers, read either at general meetings or in the sections, are to be immediately handed to the secretaries. The Executive Committee, after the conclusion of the congress, shall proceed with the publication of the transactions, and shall have full power to decide which papers shall be published, and whether in whole or in part.

7. The official languages are English, French and German.

No speaker shall be allowed more than ten minutes, with the exception of readers of papers and those who introduce debates, who may occupy twenty minutes.

8. The rules, programmes and abstracts of papers will be published in English, French and German.

Each paper or address will appear in the transactions in the language in which it is delivered by the author. The debates will be printed in English.

9. The officers of the General Committee on Organization are a president, three (3) vice-presidents, a secretary-general and a treasurer, and those elected to these positions will be nominated by the General Committee to hold the same offices in the congress. All vacancies in these offices shall be filled by election.

10. There shall be an Executive Committee, to be composed of the president, secretary-general, and treasurer of the General Committee, and of four other

members, to be elected by the General Committee. The duties of the Executive Committee shall be to carry out the directions of the General Committee; to authorize such expenditures as may be necessary, and to act for the General Committee during the intervals of its sessions, reporting such action at the next meeting of the General Committee.

11. There shall be a Standing Committee on Finance, composed of five members, to be appointed by the president, subject to the approval of the Executive Committee.

12. Those who are elected as chairmen of the several sections shall be thereby constituted members of the General Committee.

The officers elected are as follows:

*President.*—Dr. Austin Flint, Sr., of New York.

*Vice-Presidents.*—Dr. Alfred Stillé, of Philadelphia; Dr. Henry I. Bowditch, of Boston; Dr. R. P. Howard, of Montreal, Canada.

*Secretary General.*—Dr. J. S. Billings, U. S. Army.

*Treasurer.*—Dr. J. M. Brown, U. S. Navy.

*Members of the Executive Committee* (in addition to the president, secretary-general and treasurer).—Dr. I. Minis Hays, of Philadelphia; Dr. A. Jacobi, of New York; Dr. Christopher Johnston, of Baltimore; Dr. S. C. Busey, of Washington.

The Executive Committee will proceed at once to complete the work of organization. J. S. Billings, *Secretary-General.*

Washington, D. C., Dec. 1, 1884.

Society of London (Eng.).—At an ordinary meeting of this society, Mr. Arthur Durham, president, in the chair, Sir Andrew Clark read a paper on a case of

### RELAPSING PNEUMONIA

in an aged person, an abstract of which is as follows:

On March 25, 1884, the patient was first seen, and had for five days suffered from disordered digestion and malaise, with aching pains and feverishness. He was a gentleman aged 82, of vivacious appearance, light and spare frame, and of active habits. In 1877 he had had an attack of pneumonia. There was a history of his having caught cold, and when first seen the countenance was pinched; the eyes were dull; the face yellowish, the tongue loaded, the appetite gone; there was thirst; the abdomen was full; the urine high-colored, free from albumen, but loaded with urates. The breath sounds were feeble at the posterior base of the right lung. The pulse beat 86 times per minute; the smaller arteries were exceptionally soft, and otherwise sound; the skin was hot; there was a dull headache, with languor. A fluid diet was ordered, with a saline draught, and a colocynth and blue pill was given at 10 P.M. On the 26th a rigor set in; the temperature rose to 103; the pulse was 94 per minute; the breath sounds were very feeble at the right base. Poultices were ordered; salines and the pill were repeated, and an enema was prescribed. On the 27th another severe rigor came on; the general condition remained unaltered. Now there was feeble bronchial breathing, with increased vocal resonance. On the 28th another rigor set in; the mouth and tongue became dry; the thirst was increased. The bowels had been relieved. The temperature registered 104°. There was dulness over the posterior base of the right lung; the respiration numbered 24 per minute. There had been no cough. Half an ounce of brandy twice or thrice a day was prescribed, with small doses of quinine. On the morning of the 29th the report showed a restless night, but no fresh rigor had occurred. The temperature was 100, the pulse 80, the respiration 28. The patient felt much better, and had taken food well. Dulness, with increased vocal fremitus, and tubular breathing, with bronchophony, were made out at the right posterior base.

There was no pain and no distress of breathing. On the 30th there was general improvement. On the 31st a fresh rigor was observed, and the patient got rapidly ill again; the temperature was 103°, the pulse 110, the respiration 32. The tongue was loaded and dry, and there were signs of fresh consolidation in the middle of the right back. The lower part of the right lung remained much the same as before. An alkaline saline was ordered every four hours, with brandy, quinine and poultices. On April 2d the patient said he was well, and the skin was moist. There were moist crepitations over the right lower back. Within four hours of the time at which these notes were made the pulse and temperature had risen rapidly, and there were signs of renewed illness. Cough set in for the first time; the face became bluish. The signs of a third strip of consolidation were detected higher up in the right back. The brandy was increased in quantity, and ammonia was added to the medicine; hot bottles were applied to the extremities. Again, on April 3d, the patient was better; the temperature had fallen to 96°, the pulse was 80, but very weak and small. In the evening the temperature was 103°, and the consolidation had extended upwards. The notes of April 5th speak of improvement, but towards the evening the patient suddenly chilled, and all the symptoms grew bad again. The next morning the temperature was 97°, but at noon a sudden severe and prolonged rigor occurred. Strong soup and other stimulants were persevered with. There was now dulness on percussion at the base of the left lung; the skin was cold at the extremities, though everywhere dry. Another rigor occurred on April 7th, and afterwards on each day at half-past twelve there was a rigor till the 11th and 12th, when none occurred. At midday on the 13th another rigor supervened, and the patient was much exhausted; there were large crepitations to be heard at the base of the left lung. On the 14th he passed a fair night, and the temperature was 96°; there was an occasional cough and a slight amount of viscid, unstained mucoid expectoration. At midday the worst state of the patient was reached; the skin became dusky, dry and hard, with a severe rigor; the pulse was small, weak and irregular, and he had the aspect of one suffering from cholera. He remained in this state about four hours, and then began to recover at about 5 P.M. The urine contained a little albumen. There was no cough and no expectoration. The pulse was 116, compressible and irregular. There were the signs of consolidation of the upper part of the left lung. On the 15th he improved till the evening, and on the 16th he was greatly better. Later on the physical signs were clearing up, and the temperature was 98° in the evenings. The diet was changed to semi-fluid articles, and claret was allowed. On the 6th of May the patient was fully convalescent, and complete recovery soon followed. The patient had passed through as many as nine or ten severe rigors, with six pneumonic consolidations and seven weeks' illness.

In his remarks on the case Sir Andrew Clark spoke of the remarkable character, assemblage, and progression of the symptoms, and of the age of the patient, making the case one of great rarity in the annals of medicine. The nature of pneumonia, whether it were a local disease or a fever with a local manifestation, was touched upon. If pneumonia be really an inflammation or not was a question which had concerned him for many years. In his work on pneumonia Dr. Sturges considered that the phenomena of inflammation were conspicuously exhibited in pneumonia, and that the anatomical and histological phenomena were fully satisfied. Further, he not only considered pneumonia to be inflammatory, but regarded it as the pattern and model of all inflammations. Sir Andrew had contested these views at the Royal College of Physicians as long ago as 1866. In a consolidated pneumonic lung we might histologically investigate the solid exudation in the alveoli, the relations of the exudation to the alveolar wall, and the condition of the alveolar wall itself. In investigating these three conditions he failed everywhere to find any signs of cell proliferation, and there were nothing but the signs of regressive change. The number of red discs extravasated in acute pneumonia equals or exceeds the number of leucocytes; the blood discs were undergoing changes in the fibroid network just as in blood clots. In the alveolar septa there was no evidence of any change, with the exception of occlusion of some of the blood vessels. Dr. Johnson had shown that in acute nephritis the vessels were not occluded but much enlarged. The absence of signs of active cell proliferation made one ask whether the alveolar tissues might not be incapable of any other manifestation of the inflammatory process. But the facts observed after traumatic influences, in connection with tubercles and as a result of inhaled irritant particles, or from the spread of inflammatory processes from the pericardium or pleura, negatived such a notion. These considerations made him believe that the consolidation of pneumonia, though it might be an abortive inflammation, was much more like an active congestion, in which capillary extravasation took place before the inflammation could be continued to its classical completion.

With regard to the principles which guided him in treatment, there were possibly none, and medicine might be said to be the most unprincipled of arts, and that every case was a law unto itself. He had given, first, attention to the man, and next to the malady. The food was given in relays, not too liberally nor too frequently. He endeavored to maintain the vigor of the circulation, and by other measures, such as warm sponging, the maintenance of gentle evacuations, the absence of noise or fussiness, with light and fresh air to keep the organism in the best possible state for recovery.

Dr. C. T. Williams said that he had alway regarded acute croupous consolidation of the lungs, not as a local disease, and not exactly as an inflammation, but as a case of blood-poisoning. He put such cases in the class of fevers. He had seen somewhat similar cases, though the relapses were neither so frequent nor severe. Supporting treatment was all that was wanted.

Dr. Sansom asked whether there was any history of the inhalation of vitiated air. He quoted a case in which there were rigors, with the accession of febrile symptoms and initial partial consolidation of the right upper lobe; delirium was very great indeed, and lasted a few days; the illness was an extremely rapid one. A few days later he found the patient with precisely the same symptoms, which ran almost exactly the same course. In both cases there were rusty sputa, but the patient had also severe hæmoptysis. Recovery took place by defervesence at the end of a week. He referred to another case of pharyngitis with febrile acumosis on alternate days for a week, in which a severe attack of consolidation of the lungs was passed through. The etiology of this case was as conclusive as anything could well be; there was a large crack in the soil pipe, from which sewer gas found its way into the bedroom of the patient; and, in fact, all the residents in the house suffered in some way or other.

Dr. Douglas Powell was a little disappointed that Sir Andrew had not given his explanation of the case. Had the patient been exposed to malarious influences? Recurrent thrombosis suggested itself as a method of explanation, but the clinical symptoms did not fit with this hypothesis. At the fag end of pneumonia, in some instances, the resolution seems to take place too fast, and an overdose of morbid material is taken into the circulation, and heroic phenomena produced. He described such phenomena many years ago.

Dr. Rogers spoke of the case of a gentleman seventy years of age, who went through six relapses of pneumonia. Twelve years ago he had rheumatic fever with valvular affection. There was a history of gout in the family. He was attending the patient for rheumatic gout; a rigor set in, the temperature rose, and the signs of consolidation of the middle lobe of the left lung were made out. There was no cough and no expectoration. Delirium set in suddenly. There were frequent changes in the patient's state, very much as happened in

Sir Andrew's case. He believed there was some poison at work in the system. Eczema broke out in the course of the case. There was something more than inflammation in pneumonia.

Dr. H. T. Green said he still felt somewhat in the dark as to the nature of the case under discussion. He considered that "pneumonia" was a general fever with a local manifestation in the lung. He would separate Sir Andrew's case from those of acute pneumonia. It seemed to him that the case was more likely to be due to some septic influence.

Dr. Simms inquired into the family history of the case, especially as regards rheumatism and gout. The relapes at regular intervals suggested such an etiology. Cases had been recorded by Dr. Johnson, in which there was no expectoration, and in a case under his care there had been no expectoration whatever; these cases were probably of a gouty or rheumatic nature.

Dr. S. Coupland thought the case must be placed more in the category of septic pneumonia than anything else. With regard to the histological nature of pneumonia, he referred to the views of Hamilton of Aberdeen, who believed that pneumonia was not an inflammation, but was due to a profound circulatory disturbance. That view had not been accepted by the majority of histologists. The lung might best be compared to a serous membrane where there were fibrinous exudations in inflammation. An inflammatory change was almost solely a vascular change, and so where we had to do with congestion and rupture of vessels it was possible for the mind to perceive a distinction without a difference in the views which had been propounded respecting the histological nature of pneumonia. He himself preferred not to teach his pupils the view of Sir Andrew and Hamilton.

Sir Andrew Clarke, in reply, said the expectoration was very minute in quantity. It was no rare thing for him to see cases without expectoration, and he ventured to say that one-third of the cases at the London Hospital had no expectoration. He thought that there was no evidence of cell proliferation or of cell advancement, but as the whole aspect was one of regression, and, further, since there was a want of close organic union between the exudation and the alveolar wall, and no sign in the alveolus of any textural change, that he was justified in the views he held. The products of inflammation of the pleura were totally unlike those of pneumonia. Textural changes may be observed in pneumonia when the alveolar wall is excited to action by the presence of foreign material. He was quite familiar with the cases of relapsing pneumonia due to too rapid absorption from a resolving consolidation, as well as with those due to perityphlitis, pelvic cellulitis, or phlebitis. He believed that a malarial influence might have been at work in this case. Gout was also a possibility. He had seen at least a dozen such cases as the one recorded, and had made two post-mortem examinations which seemed conclusive of the presence of pneumonia. The intimate nature of disease could not be determined by anatomical alterations.

Mr. Durham showed the cervical cyst of a boy whom he had exhibited at the Society two weeks ago.

Dr. Radcliffe Crocker showed a case of gangrenous ulceration of the groin in a child; the disease began three weeks after the measles.—*Brit. Med. Journal.*

* * *

Draught of Amyl Nitrite.—Dr. Richardson (*Asclepiad*) gives a formula for the administration of amyl nitrite by the mouth: Amyl nitrite, pure, ♏xxxv; ethylic alcohol (specific gravity .830), ʒ v; pure glycerine to ℥ iss. To make a mixture of 12 doses. One fluid dram to be taken in a wineglass full of warm water. In asthma this method is specially recommended.

# SANITARY DEPARTMENT.

## Tenement House Sanitation.

The following are the suggestions made for changes in the Tenement House Act: All plumbing should be exposed to view; the law requiring spaces between houses should be mandatory, and the Board should have power to do necessary work and make changes, the cost to be a lien on the property. The agent should be responsible if he refuses to give the owner's name, the powers of the Board in relation to vacating houses should be enlarged, and the Board should have power to compel owners to introduce water on every floor.

The majority of citizens' complaints, the inspectors say, refer to vaults and defective plumbing. The inspectors add that they are unable to inspect the tenements once a year, and that their force is not sufficient. The greater part of their time is devoted to investigating citizens' complaints and to enforcing orders of the Board.

This report will shortly be discussed at the meeting of the Commission. The following are some of the preliminary recommendations of a special committee on legislation, which will also be discussed at the meeting:

Abolish all vaults.

Render all cellars impervious to water.

No building to occupy more than 65 per cent. of a lot.

A housekeeper or janitor to be in every tenement accommodating eight families or more.

Owners, etc., of houses to file their names and record of the house and other particulars at the Board of Health.

Notices to be served by posting in tenements.

That free Croton baths be established and open to the Public in tenement house districts.

That electric lights be placed in the streets in tenement house districts.

That the hall of each tenement house have free opening to light and air.

All air-shafts to be open top and bottom.

All tenements to be inspected twice a year.

## Sanitary Hints for the Schoolroom.

Our children spend so large a portion of their time in the schoolroom that whatever relates to the sanitary condition, as well as to the general discipline of the school, is of vital importance.

Large sums of money are annually spent in all our large towns for the construction and equipment of schoolhouses. Imposing buildings are erected whose architectural pretensions are "an ornament to the town," and these structures are supplied with all the "modern conveniences;" and to the casual eye they are models of cleanliness, order and beauty. Closer inspection, under the guidance of scientific intelligence, will often reveal gross neglect of some of the simplest rules of health and cleanliness. This is especially seen in the construction of water-closets and urinals. These appliances, for the sake of convenience and compactness, are often placed in the basement of the building; and the bungling of the plumber, as well as the ignorance of the architect, frequently render them sources of discomfort if not of disease. Upon examination it will be found that the urinals easily become foul and leaky; and without vigilant oversight the water-closets will send forth disgusting odors that defile the entire building. In many schoolhouses the arrangements for water-closets consist of a large vat filled with water, which receives the dejections of several hundred children for an entire day, without any flushing. As a result we find the foul air of the basement forcing its way up through hot-air pipes or ventilators, while the carelessness of janitors adds to the nuisance by allowing the accumulation of filth. Not long since, in a large schoolhouse in one of our suburban cities, diphtheria made its appearance, and so severe was the epidemic that the health authorities were called upon for inspection of the premises. It was found that the cold air that supplied the furnace was taken directly from the small yard containing the privies. The vaults of these privies were open, and nearly full of a reeking mass of liquid filth. In another large building where diphtheria broke out it was found that the room more especially affected with the disease, showing a mortality of fifty per cent., was directly over the water-closets and urinals used by some two hundred boys.

Of course we do not assert that these cases of sickness absolutely depended upon the condition of the sanitary appliances, but it is wise and safe to look sharply to these things, and insist that no schoolroom shall be considered fit for occupancy whose sanitary arrangements are not pronounced safe by official inspection. In order to insure perfect safety in this direction, no water-closet arrangements should ever be introduced into the basement of any schoolhouse. There is not only danger from carelessness in the use of the apparatus, but there is constant danger from leaky pipes, defective traps, and the clogging of waste pipes. In the architecture of the schoolhouse, provision should be made for the erection of a tower isolated from the main building, but easily connected for access and for warming. The appurtenances should all be confined to the apartments in this tower, and the ventilation could be made almost perfect, and no odors nor gases could find way to the main building.

For the sake of compactness, convenience and economy, building committees continue to adhere to the old way, and not until public opinion protests against it will the needed reform be reached. The evil is apparent, but the remedy is also apparent and easily applied.

New System of Ventilating Vessels.—An improved system of ventilation for marine vessels has been patented by Mr. J. M. J. Barton, of 300 Pitt street, Sydney, Australia. A series of pipes extends from the several compartments in the vessel to the furnace, which is closed perfectly at the bottom; the doors are made to fit very closely, so that no air can pass to the fire except through the pipes provided for that purpose. The fire in the furnace causes a draught, and as no air can enter except through the pipes, a powerful suction will be produced, and the foul air in the several parts of the ship will be drawn into the furnace; fresh air will naturally pass into the compartments through passages provided for the purposes. The inner ends of the pipes are closed by gratings, to prevent the entrance of live coals. This device can be applied in any marine vessel, but is especially adapted for steamers, as the furnace of the boiler could be utilized; in sailing vessels a special furnace would have to be provided.

Sanitary Work Needed.—There are texts for a great many instructive discourses in the vital statistics of a great city. The record of deaths in New York for the past year shows that the increase in number, as compared with the preceding year, is less than 1,000, and that the total is less by 3,600 than it was in 1881, and less by nearly 3,000 than it was in 1882. The tables show that the change for the better since those two years can be accounted for without going beyond that part of the record that relates to zymotic diseases. There has been since 1882 a marked decrease in the number of deaths assigned to those diseases that are caused and fostered by filth of one kind or another. For example, there were 2,066 fatal cases of scarlatina in 1882 and only 635 in the last year. In 1881 diphtheria caused the death of 2,237 persons; in 1882 the number was 1,525, and in the last year 1,017. There has been very little change in the number of deaths caused by constitutional diseases in the last four years. The improvement has been confined in the main to those diseases that can be warded off by the enforcement of sanitary laws, and it is due in great part to a more thorough cleaning of the streets and a growing tendency on the part of intelligent people to protect themselves. Notwithstanding this improvement, the record shows that there is still a great deal of work to be done. In the eleven years preceding 1884 there were in this city 34,967 cases of diphtheria, of which 15,697 were fatal—an average mortality of more than 1,400. Diphtheria is without doubt very often, if not always, a filth disease. It is caused, in many cases, by bad plumbing. It can be excluded from the household by proper sanitary precautions. The careless or ignorant plumber fills many a coffin in New York. It appears that, of the total number of deaths in the past year, 15,179 were those of children under five years of age, and 12,064 those of children under two years. These figures, showing that nearly half of the deaths are those of young children, bring to mind the facts reported by members of the Tenement House Commission. Thousands of these little ones perish in the districts where almost all sanitary laws are disregarded. Many are the victims of public poisoners and adulterators of food. In the crowded and pestilential barracks, where the death-rate of adults is alarmingly large, these unfortunate children are swept away by hundreds. The statistics for the year, showing as they do so many deaths that were caused by filth and could have been prevented, should remind physicians that New York is not prepared for the coming cholera.

THE SANITARY RELATIONS OF MARRIAGE TO CHOLERA.—A discovery has been made in regard to cholera, (*Times*) namely, that marriage is a prophylactic, so far as men are concerned. Recent statistics of the cholera in France show that married men are much less liable to be attacked by cholera than are bachelors. In a population of 100,000 men between the ages of 25 and 30, 51 unmarried men died of cholera, while only 18 married men fell victims to the disease. Between the ages of 30 and 35 the mortality from cholera was 78 among bachelors and 21 among married men, and between the ages of 50 and 55, 167 unmarried men and only 37 married men died. It is thus evident that in time of cholera the married man has more than three times as many chances of life as the unmarried man has. No attempt has yet been made to explain this remarkable fact, but it is not, on the whole, difficult of explanation. The married man lives in circumstances much more favorable to health than those in which the bachelor lives. For instance, his food is better, for he has a wife to look after it, and in many cases he buys his meat, his groceries and his vegetables himself; whereas the unmarried man risks his digestion at restaurants, or trifles recklessly with it at boarding house tables. The married man's linen and sheets are properly aired, and he is made to change his clothing when the weather changes, to wear rubber overshoes, and to go to bed at decent hours, whereas the bachelor has no one to see that he is properly clothed and that he does not risk his health by keeping unholy hours. If a calm frame of mind and an absence of nervous dread contribute to exemption from cholera, the married man is peculiarly fortunate. In cholera time the moment the nervous bachelor feels the slightest pain he begins to fancy that he may have contracted the cholera, and he ends by frightening himself into a genuine attack. On the other hand, when the married man has a pain he mentions it to his wife, who instantly replies, "Stuff and nonsense! You've no more got the cholera than I have. Why, I have just such a pain every day in the week," whereupon the married man is encouraged and consoled and straightway forgets the cholera. In case he really has symptoms of the disease his wife promptly sends for the doctor and compels her husband to keep quiet and take the proper remedies, but the unfortunate bachelor who is smitten with cholera sees himself deserted by frightened servants, and is left to die or recover by himself. It is easy to understand, therefore, why married men are less liable to die of cholera than are other men, and bachelor doctors will do well to pay heed to the French statistics and marry before the cholera comes.

Criminal Plumbing.—The trial of Thomas C. Holland, plumber, for criminally negligent work, was held before Special Sessions, November 6, and resulted in the imposition of a fine of $250. In default of payment Holland was sent to prison. Dummy vent pipes from wash-basin traps had been run into partitions and there terminated. The ends of these vents had been roughly battered together, but were, of course, not tight, and allowed foul air to escape into the partitions. The whole arrangement was designed simply to deceive the Board of Health inspectors; and to assist in carrying out the deception a dummy terminal pipe, supposed to be the end of a ventilating pipe, was fastened to the roof. The dummy had no connection with any *bona fide* pipes inside the house.

Sewer Ventilation.—Sooner or later, we are persuaded, sanitarians will discover the unwisdom of ventilating sewers, and as the phrase runs, "letting fresh air into the drains" by openings on the street level. None with a sense of smell can fail to have noticed the highly offensive emanations from street ventilators and "inlet" (!) gratings, frames and pans, under certain, or rather uncertain, states of the atmosphere. We fully recognize the difference between a mere effluvium and poisonous gas, but it must be admitted that the two are not infrequently associated, and the former may be accepted as a warning of the latter, although the air may be poisonous without being offensive. All things considered, for danger and decency's sake, low level ventilation must be avoided. Every single purpose is to be gained by the adoption of pipes or shafts opening at high levels, and without risk. Meanwhile it is necessary to point out that these pipes or shafts must not be so placed or constructed as to act the part of supply-pipes, actually "laying on" sewer gas into bedrooms and other apartments, by being so placed as to open near windows or chimneys. Some of the most expert and painstaking architects, engineers, and professed sanitary builders are committing this folly for the sake of a little economy. They think "it will do very well," and be "quite safe" to carry up a ventilating-pipe to the roof of a house, and finish it a foot or so above or on the side of a dormer or other window. Obviously, whenever the wind happens to blow in the direction of the window, or to "blow down"—as so often happens—the gas escaping from the pipe must be carried into the window. Then, again, they will not, if it be possible to avoid doing so, use cowls. They like to finish a pipe with a little umbrella, or to bend the sides a little on themselves, and say this "does better." If there is a chimney-stack in the neigborhood the builder thinks he does a clever thing by attaching his pipe to the brickwork and carrying it a few feet higher. Probably he has heard that it is necessary to keep it away from the chimney, so he bends it out at an angle, and thus ensures the occurrence of the very *contretemps* he ought to avoid, namely, the "sucking down" of the sewer gas into the chimney and its discharge into the rooms below. It is forgotten that every up-draught, is accompanied by a down-draught, which either encircles it as a cylinder or in some way passes it in the chimney-shaft. This is a matter of exceeding moment. Shafts and pipes connected with sewers must be carried both above and away from all openings—whether windows or chimneys or ventilators or trap-doors—communicating with houses. There is no sort of difficulty in securing this measure of safety. It only requires a firm stand on the part of the owner or " authority " against the plausible arguments of the " professional men " and "experts" engaged. Simply insist that there shall be no opening of any sort in the ground level, whether with a " charcoal pan " or however constructed. Carry all ventilators to a level above the top of the house, and quite out of the way of windows and chimneys. If this be done there need be no fear of sewer gas. If it be not done, however excellent the " system " adopted may be, there must be fear—ay, and peril.—*Lancet.*

## PHARMACY AND THERAPEUTICS.

### A COMPARISON OF WEIGHTS, MEASURES, ETC., PREPARED BY REQUEST FOR CONVENIENCE OF READERS.

#### FRENCH WEIGHTS IN TROY WEIGHTS.

| | | | |
|---|---|---|---|
| 1 milligramme | equal to | 1-65th | grain. |
| 1 centigramme | " | 1-6th | " |
| 1 decigramme | " | 1½ | grains. |
| 1 gramme | " | 15 | " |
| 1 decagramme | " | 150 | " |
| 1 hectogramme | " | 1,465 | " |
| 1 kilogramme | " | 14,720 | " |
| 1 myriagramme | " | 145,824 | " |

#### FRENCH MEASURES OF LENGTH IN ENGLISH MEASURES OF LENGTH.

| | | | |
|---|---|---|---|
| 1 millimetre | equal to | 1-1,000th | metre. |
| 1 centimetre | " | 1-100th | " |
| 1 decimetre | " | 1-10th | " |
| 1 metre | " | 39 37-100th | inches. |
| 1 decametre | " | 10 | metres. |
| 1 hectometre | " | 100 | " |
| 1 kilometre | " | 1,000 | " |
| 1 myriametre | " | 10,000 | " |

#### FRENCH MEASURES OF CAPACITY IN ENGLISH MEASURES OF CAPACITY.

| | | | | |
|---|---|---|---|---|
| 1 millitre | equal to | 15 | troy grains | water. |
| 1 centilitre | " | 150 | " | " |
| 1 decilitre | " | 1,500 | " | " |
| 1 litre | " | (1 qt.) 15,000 | " | " |
| 1 decalitre | " | 150,000 | " | " |
| 1 hectolitre | " | 1,150,000 | " | " |

NOTE.—1 grain troy is equal to 1 and 8-100ths grains in apothecary's weight.

#### TEMPERATURE AND WEIGHT.

| | | |
|---|---|---|
| 1 lb. | water at 60 deg. F. | equal to 79-100ths pint. or<br>6 067 22-100ths minims. |
| 1 oz. | " " | equal to 1 5-100ths fl. oz., or<br>505 60-100ths minims. |
| 1 gr. | " " | equal to 1 5-100ths minims. |
| 1 fl. drachm | water at 60 deg. F. | 56 96-100ths grains. |
| 1 fl. oz. | " " | 455 69-100ths " |
| 1 fl. gallon | " " | 231 cubic inches. |
| 1 fl. pint | " " | 28 87-100 " |

#### TEMPERATURES.

**CENTIGRADE.**—To convert Centigrade (C.) or Celsius to Fahrenheit—multiply by 9, divide by 5, and add 32. Thus: 40 deg. C. multiplied by 9 equal 360 deg.; divide by 5, equal 72 deg.; add 32, equal 104 deg. F.

**REAUMUR.**—To convert Reaumur (R.) to Fahrenheit—multiply by 9, divide by 4, and add 32. Thus 40 deg. R. multiplied by 9 equal 360 deg.; divide by 4, equal 90; add 32, equal 112 deg. F.

#### PERCENTAGE OF ALCOHOL IN WINES, LIQUORS ALES, ETC.

Strong Port 25, Madeira 24, Sherry 19, Malaga 17, Brandy 53, Rum 53, Gin 51, Whiskey 52 to 54, Burgundy 14, Sauterne 14, Champagne 12 to 14, Tokaya 9, Rudesheimer 10, Catawba 8 to 10, Cider 6 to 9, Mead 7, Burton Ale 8, Scotch Ale 6, Brown Stout 6, Porter 4, Strong Claret 17, Chateau Latour 9, Hock 9 to 12, Lachryma Christi 19, Vin Ordinaire 10.

**MEDICINAL AND NON-MEDICINAL THERAPEUTICS.**—Dr. Austin Flint, Sr., delivered before the first annual meeting of the New York State Medical Association an address on Medical and Non-Medical Therapeutics. From the essay, which is published in full text by the *New York Medical Journal*, we glean the following. Outside of the profession, most people believe that professional eminence is based on superior attainments in medicinal therapeutics, having no appreciation of the skill of the physiologist, the pathologist, or the diagnostician. In view of this, it is now more politic for the physician to administer than to withhold drugs.

The time, however, is not far distant when the physician will not be regarded solely as a therapeutist, but as a medical counselor, having for his function the preservation of health and the prevention as well as the treatment of disease. To effect this, the patient should be taught that most medicinal agents are curative, not directly, but indirectly, by removing obstacles which stand in the way of recovery; that nature is the efficient curative agent, and that the physician is nature's servant. When these things are generally understood by the Public, the profession will hold a more exalted position. The standard of medical education will necessarily be elevated, and the usefulness of the profession increased.

At the present time there is great diversity of opinion as to the importance of drugs. Some practitioners have an excessive and unwarrantable faith in drugs. Others are excessively and unwarrantably sceptical. The truth lies somewhere between these two extremes. The difficulties in the way of determining the exact value of a drug are very great, and until quite recently our knowledge rested entirely upon an empirical basis. This was true of cinchona and other antiperiodics, as well as of mercury and iodine, the antisyphilitics.

Formerly it could not be stated how these drugs acted; now we know that it is through their power as parasiticides. This knowledge is due to the discovery of the parasitic origin of certain diseases. It is probable that in the not distant future we shall be able to control all the essential fevers, with cholera, pertussis, and phthisis pulmonalis, etc., and that we shall have a particular parasiticide for each of the specific parasites of these diseases. Alimentation is an essential factor in therapeutics. It must not be lost sight of that frequently patients may die of starvation; especially is this true in fevers. No patient can be over-fed, so long as the food taken is digested and assimilated. The appetite and sense of taste are nature's indications as to diet.

There are, however, certain diseases in which, because of the patient's morbidly blunted perceptions, instinct fails to express the needs of the system; especially does this condition exist in typhoid and typhus fevers. In these conditions, milk and eggs satisfy fully the nutritive needs of the system, and there is no substitute for them.

The value of beef tea, meat juice obtained by pressure, infusions, decoctions and extracts, is highly overestimated, and have led to the loss of many lives by starvation. The method of preparing meats by the Leube and Rosenthal plan, by which they are brought to the condition of peptones through artificial digestion, should be properly appreciated by physicians. Many disorders, especially those of the nervous system, are often due to insufficient alimentation. This is a fact, proved by the success of the nutritive treatment inaugurated by Weir Mitchell. In speaking of alcohol as a food, the author says: "I feel warranted in affirming that in a certain proportion of the cases of phthisis alcohol antagonizes the progress of the disease, and that in the continued fevers it is often a means of saving life. It is indicated in all febrile diseases."

FLUID EXTRACT OF SENEGA.—Pharmacists and physicians frequently complain of and send back this fluid extract as being "worthless" or "spoiled," because occasionally it gelatinizes. All good Senega root contains a large amount of pectin, and the better the root the more pectin it appears to contain; or, at least, when the fluid extract is made from root of only fair quality, it is never the subject of complaint. But when the root is of very good quality and very strong in its sensible properties, the preparation gives the maker a great deal of trouble and letter-writing about it. A curious circumstance is that in the writer's experience of twenty-five years and many thousand pounds of this preparation, he does not remember to have seen a single bottle gelatinize until after it had been sent out. This, and the circumstances that complaints are most common in winter, seems to show that the cold of transportation, or of places where it is kept, is the cause, and the object of this note is simply to say that the gelatinized preparation only has to be well warmed up to become as fluid as ever, and of course as good as ever. But there is much more to be said on the subject if it ever be reached in the review of the Pharmacopœia in these pages. —*Squibb's Ephemeris.*

HYDROBROMIC ACID.—Dr. Squibb writes thus of hydrobromic acid in *Ephemeris:*

"Its most common, and probably most effective use, is as an addition, either constantly or intermittently, to solutions of the bromides when these have to be taken for a long time and in full doses. In this way full bromide doses may be easily maintained, while the effect of the bases is diminished. Full doses of the acid are difficult to administer on account of its intense acidity. It is best given with sugar, or with syrup, or with the syrup of acacia, and with lemon syrup it is somewhat like lemonade. Large dilution is always advisable. The dose of the officinal acid is 2 to 4 fluid drachms, which is equal in bromine to 17 or 34 grains of the potassium salt. An equivalent dose of the 34 per cent. acid is about 27 to 54 minims. This acid is very useful in making extemporaneous solutions of many bromides. For example, the very effective bromide of lithium may be very easily made extemporaneously by prescription by simply saturating, or nearly saturating, the acid with lithium carbonate."—*Medical Summary*, December, 1883.

AMERICAN PRIORITY IN THE DISCOVERY OF COCAINE (ERYTHROXYLINE).—The *Medical Record* says: We are glad to give prominence to the following letter from Dr. Samuel R. Percy, of this city, in which he puts in a claim, apparently a just one, of priority in the discovery of cocaine, or as he called it, "erythroxyline." He writes: "On November 4, 1857, I read before the New York Academy of Medicine an exhaustive paper upon the leaf of the plant erythroxylon coca, and stated that I was busy in its chemical investigation. On December 2, 1857, I exhibited to the Academy of Medicine one scruple of the alkaloid of the leaves, to which I gave the name erythroxyline. At the same time I left with the librarian of the Academy this scruple of erythroxyline, a quantity of fluid extract and some solid extract, and also a fine sample of the leaves. I read before the Academy the method of preparing the alkaloid, and a number of physiological experiments upon dogs. I then stated that the hydrochlorate of erythroxyline had a peculiar but not unpleasant benumbing and paralyzing effect upon the tongue, unlike that produced by aconitia and not so persistent. The librarian of the Academy has been unable to find the paper or the alkaloid, but the fact of such a paper having been read, and such an exhibit having been shown, is recorded on the books of the Academy. I still hope to find the paper. Some three years after this, Niemann, in Germany, discovered the same alkaloid, and in his announcement called it "cocaine." Immediately upon this announcement I reiterated the priority of the discovery in Dr. Stephen Smith's 'Medical Times.' I also personally saw Mr. George Wood, of Philadelphia, and he promised that in the next edition of the 'United States Dispensatory' the subject should be fairly stated. He forgot it. The name cocaine is not a correct one, it is almost universally called cocaine, leading one to suppose that it is a product from the cocoa berry. With its correct name, erythroxyline, it cannot be mistaken. As an American, I claim the name given to it in America, and hope that every American surgeon will do the same."

THE MOST POWERFUL ANTISUPPURATIVE, according to Trastour, is Lugol's solution, or iodide of calcium. He gives the former in doses ʒ iij.-ʒ iv. daily.

THE GREEN COLOR OF CANNABIS INDICA EXTRACT NOT DUE TO THE PRESENCE OF COPPER.—Dr. Squibb, in *Ephemeris* for September, corrects an error committed by Mr. Henry Maclagan in the *American Druggist* of July, 1884. Mr. Maclagan attributed the green color of cannabis extract to copper introduced by manufacturers, either purposely or through ignorance, and that this extract cannot be of a green color without being contaminated with copper. Careful experiments by Dr. Squibb show that good hemp extract ought to be green in color, and that an extract made purposely in a copper vessel, to determine how much of that metal would enter into its composition, showed that a medium dose of the extract made in this way would contain .00074 grains of copper.—*N. C. Medical Journal.*

ROOSEVELT HOSPITAL FORMULÆ.—EXTERNAL APPLICATIONS.

*Evaporating Lotion.*

℞. Muriat. ammon....... ℥ ss.
Alcohol.............. ℥ iv.
Water, s. q.......... Oj.
M. External use.

*Red Wash.*

℞. Sulph. zinc........... grs. xvj.
Comp. spirit lavend... ℥ ss.
Water, s. q.......... Oj.

*Churchill's Tinct. Iodine.*

℞. Iodine................ grs. lxxv.
Iodide potassium..... grs. xv.
Alcohol.............. ʒ vj.
Water................ ʒ ij.
M. For external use.

*Sol. Carbolic Acid and Glycerine.*

℞. Carbolic acid, pure.... ʒ j.
Glycerine, pure....... ʒ j.
M. C. A. and G. as a base for dispensing for internal use.

*Comp. Tinct. Green Soap.*

℞. Green soap, }
Oil cade, } equal parts.
Alcohol, }

Dissolve the green soap in the oil of cade with the aid of heat. Add the alcohol and shake. For external use.

*Sol. Lead and Opium.*

℞. Sol. subacet. lead..... ℥ j.
Tinct. opium.......... ℥ ss.
Water, s. q.......... Oj.
M. External use.

*Alkaline Lotion.*

℞. Bicarb. soda.......... grs. x.
Biborat, soda......... grs. x.
Cherry laurel water... ʒ j.

*Sulphurous Acid Lotion.*

℞. Sulphurous acid...... ℥ j.
Water............... ℥ iij.
M. External use.

*Comp. Chloroform Liniment.*

℞. Chlorof. commercial, }
Tinct. opium, } of each ʒ j
Tinct. camph., }
Tinct. capsic.......... ℥ ss.
M. External use.

*Liniment Stimulant.*

℞. Ammonia water...... ʒ ss.
Tinct. capsicum...... ʒ ss.
Soap liniment........ ʒ j.
M. External use.

*Borated Solution.*

℞. Salicylic acid.......... 1 part.
Boric acid............. 6 parts.
Water................ 500 pts.

*Chloroform and Aconite Liniment.*

℞. Commercial chloroform ℥ j.
Tinct. aconite root.... ℥ j.
Soap liniment........ ℥ ij.
M. External use.

*Ward Gargle.*

℞. Biborate soda........ ʒ j.
Sat. sol. chlorate potass. ℥ j.
Water, s. q.......... ℥ viij.
M. Use as a gargle.

*Chloride Zinc Gargle.*

℞. Chloride zinc........ grs. v.
Glycerine............ ℥ ss.
Water, s. q.......... ℥ iv.
M. Use as a gargle.

*Tannin and Alum Gargle.*

℞. Alum................ ʒ ss.
Tannin.............. ʒ ss.
Glycerine............ ℥ ss.
Water, s. q.......... ℥ iv.
M. Use as a gargle.

*Alkaline Tar Water.*

℞. Liquid tar............ ℥ ij.
Caustic potass........ ℥ j.
Water............... ℥ v.
M. External use.

—*Communicated to the Druggists' Circular.*

SWIFT'S SYPHILITIC SPECIFIC.—Dr. A. A. Anderson, of this city, asks for the composition of "Swift's Syphilitic Specific." We quote the following, written by B. I. A. Cull, M.D., of Camilla, Ga., from an old number of the *Medical Brief:* "This preparation (S. S. S.) I have used and have known it used years before Swift was born. It was first brought to notice by a Georgia M.D., who got it direct from the Florida Indian chief, "Billy-bow-legs," now and for many years living west of the Mississippi River, many miles from his happy hunting grounds. The Georgia M.D. used it many years in an extensive practice, and he stated to me when he gave it to me that he never knew a single case it did not cure. I have used it in a great number of cases since 1856, and have not failed in a single instance in curing every case, both primary and constitutional, that I have treated with the remedy. It is cheap, and but little trouble to obtain, and I assure my medical brethren that it will pay them to use it; besides, it is sure and a safe remedy, being altogether harmless.

| | |
|---|---|
| ℞. Old man's gray-beard root (chionanthus virginica) | 1 bushel. |
| Prickly ash root | 16 ounces. |
| White and red sumac root, of each | 8 " |
| Sarsaparilla root | 10 " |
| Sulphate of copper | 8 drachms. |

Bruise the gray-beard and sumac roots and put them with the sarsaparilla in an iron pot sufficient to hold eight gallons of water, or cover the roots completely with the water. Cover the pot with pine tops and boil slowly until the liquid assumes the color of ink. Strain while warm, add the sulphate of copper and good Holland gin q. s. to prevent fermentation. Sig: One wineglassful four times a day. Strictly abstain from horseback riding, butter or very greasy food, all kinds of spirits or fermented liquors. Of course the chancre must be treated in the usual manner.—*Medical World.*

RINGWORM.—℞. Thymol, ʒj. to ij.; chloroform, ℥j.; olive oil, ℥iij. M. The thymol destroys the fungus, the oil prevents irritation and rapid evaporation, while the chloroform facilitates the absorption of the active ingredients by acting on the sebaceous glands.—*Medical World.*

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ASPHYXIA AND ACCIDENTS FROM CHLOROFORM.—Dr. Benjamin Howard lately gave a demonstration at La Pitié Hospital, in the wards of Professor Verneuil, of the mechanical treatment of asphyxia and accidents from chloroform. The following is a summary of the demonstration, which is the same as previously given by Dr. Howard before the Royal Medical and Chirurgical Society of London: "1. The drawing out of the tongue, as is generally resorted to in such cases, is not sufficient to raise the epiglottis, the anatomical conditions of the parts being opposed to the production of such a result. 2. The raising of the epiglottis can be effected in only one way, and that is by placing the head and neck in the position of forced extension. This position, according to Dr. Howard, results in the separation of the tongue from the pharynx, the widening of the calibre of the latter, and of thus establishing a free and large passage, without any obstruction, from the nose to the lungs." Great interest was manifested in the demonstration, and Professor Verneuil made some judicious remarks, in which he acknowledged the correctness of Dr. Howard's views, and pointed out the great utility of putting them into practice in preference to the methods in vogue in the treatment of the cases referred to. The same demonstration was repeated by Dr. Howard on Saturday, the 15th inst., at the Salpêtrière, in the wards of Professor Charcot, and with equally satisfactory results.

# REVIEWS.

THE STORY OF MY LIFE.—By J. MARION SIMS, M.D., LL.D. Edited by his son, H. MARION SIMS, M.D. NEW YORK: D. Appleton & Co. 1884. 12mo., pp. 471. Price $1.50.

In the last number of this journal it was stated, in a review of this book, that the author of it manifested a graphic power of rare excellence, and an ease and fascination of narrative that were conspicuous and remarkable. It is not, therefore, strange that in another notice of the work some examples of these gifts, so unsuspected by himself and so welcome to his friends, should be placed on record.

In speaking of Trousseau, he brings him thus interestingly before the reader:

> Trousseau was one of the greatest physicians of the age—a man endowed with physical beauty as well as fine intellect, the philosophic physician, the classical litterateur, the elegant teacher, the successful practitioner. He was without a rival. I had never known such a grand man who was purely a physician, and yet he was a very miserable man, and why? Had he not reached the highest distinction in his profession? Was he not exhibited as the highest authority in medicine all over the world? His lectures were translated into all languages, and then he was the leading practitioner, the great consultant, the fashionable doctor in Paris, and had accumulated a large fortune. Everybody spoke well of him, everybody admired him as a man; his private character was above all reproach; he had no children whom he could not recognize as his own. As the world saw the man, they had the right to think and to see that he ought to be one of the happiest of men. True, he was not Court physician, but every other ambition of his life had been fully gratified, and yet he was unhappy, and why? His wife was an elegant and accomplished woman, of great beauty and fine intellect, but they were separated. He had a daughter, one of the most beautiful women in Paris, who married a man too much her senior. They were incompatible, and separated. He had an only son who was a scapegrace. He was a gambler and everything else that was bad. His father was worried to death with his dissoluteness and foolish extravagance, and had to pay enormous sums of money to extricate him from his disgraceful orgies and gambling complications. He was married to a fine woman, who ought to have made any man happy, but he neglected and made her miserable. . . . Trousseau had not seen his son for a long time before he died. About a fortnight or three weeks before this event his son went to one of the gambling hells of Paris and lost all his money, and more than he could pay besides. His poor father died soon after this, and his unworthy son saw a notice of his death in a London paper the next day, and I saw the tall, handsome, wretched man bending heartbroken over his good father's coffin in the Madeleine, whence he followed it to its final resting-place in the Père la Chaise. We are happy or unhappy in this life as our children choose to make us.

Dr. Sims, when abroad in 1863, was physician to the Duchess of Hamilton, and went with her to Baden-Baden. She gave him a beautiful château to live in. It was furnished, and had never been occupied before by any but royal persons. He went to Paris, and was presented to the Empress Eugénie. Eugénie soon went to St. Cloud, accompanied by the Duchess. Dr. Sims was afterward sent for and installed in the palace in order to be near the Empress, who was ill with diphtheria. He says:

> I remained at St. Cloud a fortnight. During that time I had the professional supervision of the Empress's health, saw her every day and every evening. Almost every afternoon we would get in carriages and drive in one direction or another. Occasionally we would sit under the shadows of the trees or in the porticoes of the palace, and engage in lively conversation. She (the Empress) was beloved—idolized, as it were—by all her household and all the Court circle, and by everybody that came in contact with her. I knew the nurse very well that was with her when the Prince Imperial was born. The Empress was very ill, and she was bed-ridden for a long time, and I have heard the nurse say that she had never heard her say a cross or disagreeable word, or complain of anything during the whole of this long illness. I have sat at the table night after night for two or three hours at a time, and heard the Empress and Duchess of Hamilton talk upon every imaginable subject. I was amazed at the profundity and the universality of her knowledge.

Dr. Sims at that time did not speak a word of French. The Emperor spoke remarkably good English. When Dr. Sims first saw him his manner was so gentle and kind that he " really forgot he was talking to an Emperor." After he had left the imperial presence he was mortified at remembering he had never once addressed him as " Sire." It was at this time that he penned his most beautiful and pathetic letter to his wife. As an evidence of mature affection, loyalty and humility, it is unsurpassed. The following is an extract from it:

> Not only now, but often while I sit in the midst of the decorated savants of this great city, my thoughts turn instinctively to the wife of my bosom, who, as the mother of my children, is a thousand times dearer to me than she was in the springtime of life, as the playmate of my childhood and the idol of my youth. To your gentle care and loving kindness and wise counsels I owe all that I am, and I feel that, with all my successes, all my triumphs, with the prospect of lasting fame, I am far, very far, from being worthy of you; for when I have told you thousands of times that you were too good for me, I have been in earnest.

He speaks of her admirable fortitude and endurance in the period of their poverty when they first came to New York in the following language. The frankness of his confession in regard to his depression and poverty is as conspicuous as is the tribute to his wife. He thus writes of that period of darkness and suffering:

> We were reduced to the very lowest extremity. My courage was all gone, but she was as calm and as quiet as possible for one to be. I thought that I would have gone crazy, and I did not know what in the world to do, things looked so dark. And then we had to send our children to the public schools, because we were not able to send them to a private school. Of course the public schools were good enough, but we would not have chosen the public schools as the place to send girls of ten and twelve years of age; and to see my wife cutting up her dresses, her new fine dresses, to make her children appear respectable at school, and doing her own cooking to save $9 a month—altogether I was as near going into an insane asylum as a man ever was and not go there. Things had come to the very last extremity.

But to turn away from these brief examples, and to more fully appreciate the graphic power and ease of description so conspicuous in this book, one must read the following description of Sims' introduction to the perplexities and disappointments of actual Practice:

> I returned to my home in South Carolina about the middle of May, 1835

I went home with everything prepared to begin the practice of medicine. I had had no clinical advantages, no hospital experience, and had seen nothing at all of sickness. I had been able to buy a full set of instruments for surgical operations, and I laid in a full stock of medicines in Philadelphia. My father rented me an office on Main street. I had a sign painted on tin that would reach one-third of the way across the end of my office. It was certainly two feet long, and, like all young doctors just starting, I wanted to let people know where I could be found. I attended my office, and was ready for consultation and for patients. One morning, at the end of two or three weeks, as I was sitting in my office quietly, surrounded by my library, which consisted of seven books, octavo volumes, safely locked up in one of the little drawers in my bureau, Mr. Mayer, an important personage in the town, came whistling along. Mayer had been its mayor; he had been my tailor from the time I was a little boy. He had made coats for me before I was permitted to wear tails to them.

He said, "Good morning, Marion" (for nobody called me doctor). I had lived there all my life, knew everybody in the town, and everybody called me Marion. "Have you had any patients yet?"

I said, "No, Andy, I haven't had a patient yet."

"Well," he said, "I wish you would go up to my house and see my baby. It is very sick and has been sick for some time. I wish you would go up pretty soon."

I said, "Very well, I will go up immediately." He passed on to his shop, and I walked up to his house. I thought to myself that this was a good beginning, really. Here is the most important personage in the town who is my first patient, and if Andy Mayer patronizes me my success will certainly be assured. When I arrived I found a child about eighteen months old, very much emaciated, who had what we would call the summer complaint, or chronic diarrhœa. I examined the child minutely from head to foot. I looked at its gums, and, as I always carried a lancet with me and had surgical propensities, as soon as I saw some swelling of the gums I at once took out my lancet and cut the gums down to the teeth. This was good so far as it went. But when it came to making up a prescription, I had no more idea of what ailed the child, or what to do for it, than if I had never studied medicine. I was at a perfect loss what to do, but I did not betray my ignorance to the mother. I blandly said:

"Mrs. Mayer, if you will have the kindness to send Jennie down to my office in the course of an hour from this time, I will have medicine for the baby, and write out the directions how to give it."

I hurried back to my office, and took out one of my seven volumes of Eberle, which comprised my library, and found his treatise on the "Diseases of Children." I hastily took it down, turned quickly to the subject of "Cholera Infantum," and read it through, over and over again to the end, most carefully. I knew no more what to prescribe for the sick babe than if I hadn't read it all. But it was my only resource. I had nobody else to consult but Eberle. By the by, he had a peculiar way of filling his books with prescriptions, which was a very good thing for a young doctor. He was a good writer, and a very practical man, and would be considered good authority even at this time. The most natural thing in the world for me to do was to begin. At the beginning of his article of twenty or thirty pages there was a prescription, but I do not remember whether it was a powder or a mixture. There was chalk in it. So I compounded it as quickly as I knew how, and had everything in readiness for the arrival of Jennie. She took it back to the house, and the mother began to give it according to the directions, which were written out. I was very impatient for the time to come when I should make my visit, and see the effects of the medicine and the Eberle prescription. I was there punctually on time. I was very much surprised to find the baby very much as in the morning; no better and no worse. I saw that as the medicine had done no good it was necessary to change it. And so I requested Mrs. Mayer to send Jennie down to my office again at a given time for a new prescription for the baby. I turned to Eberle again, and to a new leaf. I gave the baby a prescription *from the next chapter.* Suffice it to say, that I changed leaves as often as once or twice a day. The baby continued to grow weaker and weaker. "Is it possible," I thought, "that this child can die? Did any young doctor ever lose the first patient he ever had, and just as he was starting out? Providence could not be so cruel as to allow me to lose my first patient, in a little town like this, with everybody talking about it, and especially the child of so important a personage as Mr. Mayer." I felt very unhappy about it.

Meantime, an old nurse was asked to come and take care of the child. It is well understood that there is a curious antagonism between old nurses and young doctors. They have an idea that young doctors don't know a great deal, and the old nurses are not very far from right. This old nurse seemed to scrutinize me, and very particularly watched everything I said and did. Nothing escaped her, and I felt very uncomfortable in her presence. I wished that she had never come there. However, one night I was sitting by the baby, in an anxious mood of mind, and wondering what was to turn up next. I was feeling its pulse, and watching it carefully. The old nurse sat on the opposite side of the bed, when she said, "Doctor, don't you think that this baby is going to die?" I said, "No, madam, I do not think so, not at all." Externally, I was very calm and self-possessed; but internally I was not, for I really did not know what that child would do. Presently the child stopped breathing, and I thought it a case of syncope. I never dreamed that it could die. So I jerked the baby from the bed, and held its head down, and shook it, and blew into its mouth, and tried to bring it to. I shook it again, when the old nurse laid her hand on my shoulder gently, and said: "No use shakin' that baby any more, doctor, for that baby's dead!" Well, I laid the baby back in the bed, and my feelings can well be imagined at the idea that I had lost my first patient. I attended the funeral; I was the chief mourner of all. Certainly its father and mother did not feel so badly over the loss of their child as I did at the loss of my first patient. I was very melancholy and sad, for I thought that everybody in town would know that I had lost my first case, and Mayer's baby at that, and everybody was sorry for him and for me.

About two weeks had rolled around, and the depression which I had felt had somewhat subsided, when Mr. Elias Kennedy came to my office one morning. Mr. Kennedy was foreman for Mr. Mayer, and I had known him all my life. He came in in somewhat of a hurry, and said:

"Marion, my baby is real sick, and I wish you would go up to my house and see it. I hope you will have better luck with it than you did with Andy's baby."

I said, "Elias, if I don't, I'll quit the town." I went up to see Mr. Kennedy's bady, and, as bad luck would have it, it was about the same age and same size as Mayer's baby, the same prostrating condition of things, and the same disease. I was nonplussed. I had no authority to consult but Eberle; so I took up Eberle again, and this time I read him *backward.* I thought I would reverse the treatment I had instituted with Mayer's baby. So, instead of beginning at the first of the chapter, I began at the last of the chapter, and turned backward, and turned the leaves the same way, and reversed the prescription. The baby got no better from the very first. I did not have any consultation in the first case, for there was no doctor in town to counsel with; for my old preceptor, Dr. Jones, had gone to Tennessee on a visit to his sister, and he was the only doctor in the town besides myself. He returned while I was in attendance upon Mr. Kennedy's baby. As soon as he came home I went to see him. I said: "Dr. Church" (everybody called him Dr. Church), "I lost Andy Mayer's baby since you have been away. If you had been here he would have lived. But he is dead; and now Elias Kennedy's is sick and I want you to go and see it and save it."

"I will go," he said, "with pleasure, Marion."

"But I want you to go at once," I said; "there is no time to wait."

So the dear, good old doctor went up with me to Elias's very cheerfully, and went into the room. He was clear-headed and looked at the patient carefully, and, at the first glimpse, he knew all about it. No questions were necessary, and immediately afterward he was satisfied. He proposed that we would have a consultation, and so we went out for that purpose. It was pretty hot in the house, and so we went out on the shady side, in the corner of the chimney. The first thing he said to me, when we got there, was: "Well, Marion, that baby is going to die."

I said, "The devil, you say; you don't say that this baby is going to die?"

He said that it would not recover.

"Then," I said, "if this baby dies, doctor, I shall never be your successor in this town, for I shall leave."

He replied, "Marion, that baby is going to die; it will die to-night." And it did die, and it died that night. Again I had to be chief mourner at the funeral of another little lost citizen of Lancaster. I went home sadder than ever. I just took the long tin sign-board from my office door. There was an old well back of the house, covered over with boards. I went to the well, took that sign with me, dropped it in there, and covered the old well over again. I was no longer a doctor in the town of Lancaster.

As every reader will be glad to read some of the author's peculiarly comical adventures, there is nothing in the book more comic than his description of "My first lie;" it is as follows:

It was said that Washington never told a lie. I am very sure I am not Washington, for I told one lie in my life, and it was a "whopper;" but I told it very mildly. I always felt sorry that I had to lie, but I cannot say I have regretted so much that I did. It happened in this way at the schoolhouse:

At twelve o'clock there was always dismission for play-hours. There was the best of remarkably good boys, Ward Crockett. He always took his seat in the master's chair and sat there studying his lessons while the rest of us were out at play, and he was never known to miss any question put to him. One day Frank Massey came to me and said, "Look here, Marion, I want to break up this Ward Crockett business—sitting in master's chair. Now I tell you what you do. You see this pin?" It was nearly two inches long, as large as a knitting-needle, with a big head and sharp point. Said he, "You take this pin, and I will go and get Ward Crockett and take him to the well. While we are gone you will have half an hour, and you fix that pin in the centre of the master's chair. When he comes back and sits down I don't think he will get much of a lesson afterward." I very foolishly agreed to do what he had told me. Presently, Frank Massey and Ward Crockett were seen walking toward the well. I immediately entered the academy; there wasn't a soul in it; everybody was out at play. I very ingeniously arranged the pin in the centre of the master's chair-seat, with the point sticking directly upward, and fixed it so that it was difficult to turn it to either side. Ward Crockett became amused at a game of ball out in the yard with us, and didn't go into the house that day at all to get his lessons. At two o'clock the school was called, and the class of large boys was the first to recite. The master was walking up and down in front of the class with book in hand saying, "Next;" "right;" "next;" "right," and so on. The answers were all given very correctly and the recitation was progressing finely. It was about half through, and after a while the teacher got tired of walking and went to sit down. He went down into the chair, but he flew up like a rocket; his head almost touched the joists above him. Never was a whole school so surprised as at Mr. Connelly's gymnastic feat. Nobody knew who put that pin in the chair but Frank Massey and myself. But he was certain that one of three young men in the class had done it. He thought it might possibly be Frank Witherspoon, but was very sure that it was either Stark Perry or William Foster, and he thought he would fasten it on the guilty party. So he began at the head of the class, and said, "Rush Jones, did you put that pin in the chair?" He said, "No, sir."

I said, "My God, if he asks everybody the question separately about that pin, what is to become of me? If he goes on in that way he will certainly ask me, and if he finds out that I put that pin in there he will surely murder me."

"Ward Crockett, did you put that pin in the chair?" He answered, "No, sir."

Suffice it to say that he went on, calling each one by name. Presently he came to Tromp Witherspoon. "Witherspoon, did you put that pin in the chair?" He said, "No, sir." The thing was getting close to me. I said, "Good heavens! Look how pale he is! I think I must tell the truth, and how am I to do it."

However, before he got to me, he came to William Foster. He thought he had his man. He hesitated, and looked at him, and tried to browbeat him. He said, "William Foster, did you put that pin in my chair?" He said, "No, sir, I didn't; neither do I know who did." The teacher looked despondent after that. Another was asked, and another, and presently he came to the youth beside me, James Adams.

"James Adams," he said, "did you put that pin in my chair?" The teacher well knew that he didn't. I was shivering and felt very cold. He addressed me very mildly: "Marion, did you put that pin in the chair?"

I said, "No, sir," timidly. I thought I would say yes at the last moment, but Mr. Connelly's pale face, compressed lips and clenched hand overawed the truth, and it could not come forth.

Still he went on. Presently he came to Perry. He stopped still, and looked at him fiercely, with a sort of sardonic smile. He thought he had his man at last. He had started out with the expectation of fixing it on Perry or Foster.

Perry was his last hope for revenge. He said, "Stark Perry" "Sir?" "Did you put that pin in my chair?" "No, sir, I did not; and moreover I don't know who did put it there, either."

That pin was always a mystery. No one in the school ever suspected Frank Massey or me. The little lie I told worried me for some time afterward.

Twenty-eight years after this, when I was living in New York and working to establish the Woman's Hospital, I heard of a preacher by the name of Connelly, who was living in Newburg. I wrote to him, asking him if he was the Henry Connelly who had charge of the Franklin Academy, in Lancaster, South Carolina, in 1825-'27. He answered me very kindly; said he was the same man, and that he was coming to see me on a certain day. When he arrived I was not at home, and my wife was out. He had never kept the run of any of his old students, and he did not know what had become of any of them, and he was very glad to hear from me. When he arrived, as I said, I was out and so was my wife, and the children came in to see him, knowing that he was to come, and, as they went up to shake hands with him, he said: "How much this little girl looks like a little girl I had in my school twenty-five or twenty-six years ago. Her name was Theresa Jones." The little girl said: "Why that was

> my mamma's name." He replied, "That is very odd, but you look exactly as your mamma did then."
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> My house was always after this a stopping-place for him. He always had a room there, and frequently came to see us, and sometimes he stayed a day and a night; but he frequently dined with us, or took luncheon with us, when he came to town, and we were ever happy to see him. One evening, while we were sitting at dinner, my two youngest little children got to laughing, and I said, "What are you laughing at?" One of them said "Oh, nothing; but isn't that the man whose chair you put the pin in when you went to school to him?" I didn't know but what he understood the children, and I said to him, "Mr. Connelly, I have something to say to you which has been on my conscience for more than a quarter of a century." I then told him all about the story of the pin. He took it in very great earnestness and bad humor, and could not enjoy it. He was mortified to death. Of all the seventy-five boys in his school, he said, I was the last one he would have suspected of doing such a thing. Mr. Connelly could not forgive it, and he never came to my house after that day.

But it is his description of the old country school-house in which all will recognize a graphic power rarely excelled. Every reader who has passed through such scenes will say that the picture is perfect, and as amusing as it is complete:

> When my mother was about ten years old she was sent to school to Mr. Elijah Croxton. This was in 1802. The schoolhouse was in the pine woods, two miles from her father's house. It was a log cabin about twenty by twenty-five feet—made of pine logs six or eight inches in diameter. There was a window about two feet square at one end of the cabin, and but one door. That was on the side of the house looking east. On the opposite side one log, about three feet from the floor, had been cut out to admit light. This made a longitudinal opening twenty-two or twenty-three feet long and a foot wide. Just under this long opening there was a broad plank, eighteen or twenty inches wide, smoothly dressed, extending the length of the open window, securely fastened to the wall, and sustained by upright posts at each end of the plank and in the centre. It made an admirable writing-table. Here the advanced boys and girls, who were studying arithmetic and writing, sat with their backs toward the teacher—whose seat was just at the right of the door as you entered—while the smaller children, learning to spell and read, sat at either end of the cabin with their faces toward the teacher. The chinks or open spaces between the pine logs were first filled with clay, then covered with boards nailed on outside.
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> It was summer time. The students of arithmetic were permitted to go out and sit in the shade of the house, or under the trees, till they had worked out the sums allotted to them by the master. When this was done the pupils would come in, and the teacher would look over the slate, and, if the work was satisfactory, he ordered the pupil to transfer the sums from slate to copy-book. Mahala Mackey, on a hot, sweltering day, about 11 o'clock, came in with slate in hand. Mr. Croxton looked it over, and said "all right," and she took her seat about the middle of the long writing-table, with her back to the teacher, and began to copy her sums. The school was unusually quiet. It was the happy season of flies and bees and butterflies and toads and lizards and reptiles of that hot climate. A green lizard, or chameleon, which is green or brown as occasion requires, had been for an hour running around in the open spaces between the logs: the logs had not been peeled, and the lizard's rapid running over the dry pine bark made a great noise. The antics of the cunning little lizard amused the little boys very much, and distracted their attention from their books. They could not refrain from giggling, and the teacher called up two or three of the principal ones and flogged them. Soon after Mahala Mackey had settled down

to her copy-book the impudent little lizard came rattling along the open space in front of her seat, and she, not knowing anything of what had happened that morning, grabbed and caught it by the tip of the tail, and, with a shriek, gave it a sling backward. Looking around, frightened at what she had done so automatically and undesignedly, what was her amazement when she saw the lizard hanging to the end of the teacher's nose, while he was knocking away, and crying out with pain at his fruitless efforts to tear it loose from its firm hold. It had caught him by the projecting end of the septum, which separates the two nostrils, and its teeth had gone through and locked. While Mr. Croxton was floundering away at the lizard, the frightened little red-headed Mahala shot out of the door, by the side of the teacher, and took to her heels, and ran bare-headed to her home, with greyhound speed.

The next day her father went to see her teacher about the unfortunate occurrence of the previous day. Mr. Croxton's nose was very red and swollen, and he seemed to look upon the affair as a personal indignity; and, strange to say, he refused to allow Mahala to return to the school unless her father would consent to his flogging her. Of course Charles Mackey was indignant, and refused to have his child punished for that which was so purely accidental; and she never went to school to Mr. Croxton again.

It is strange, with a style so strong and yet so simple, so easy and yet so fascinating, Dr. Sims was totally unconscious of his power. When he wrote his first article for a public journal he was thirty-two years old. The article gave an account of his successful treatment of hare-lip, but he was so thoroughly ashamed of his use of English that he hid away from the eyes of his professional elders at home the only copy extant there of the journal containing his article. Years afterward, when urged to write his autobiography, he "blushed like a woman." The truth is that Dr. Sims was a man entirely lost in his work, and believed himself competent only for that. Self-consciousness and conceit were things wholly apart from him. In all his career, as here related by himself, he appears never to have associated his work with his own fortunes exactly in the way that most men do. He seems rather to have associated it, so far as he thought of its ultimate consequences, with the fortunes of medical science.

While the facts of his life, from the period at which his autobiography closes up to the time of his death, we fairly well know, it is and always will be a cause of deep and general regret that he was not permitted to complete "The Story of My Life."

The Report of the Chief of the Bureau for the past official year has been received. It shows great fidelity and efficiency on the part of Dr. F. M. Gunnell, Surgeon-General of the United States Navy. The mortality of the past year has been but 4.55 per thousand of the force. The insane of the navy in hospital numbers 62. The naval hospitals at Chelsea, New York, Philadelphia, Norfolk, Washington, Mare Island and California are in excellent condition. The Museum of Hygiene is doing good work. The frauds that were reported soon after the present Surgeon-General was placed in charge seem to be extensive, and the amount involved is not yet known. They are being actively investigated. The statistical reports furnish now, in brief, the facts of importance, and the expense involved has been greatly reduced. The Surgeon-General makes the excellent suggestion that the younger officers of his Department, when their duty renders such a course practicable, be allowed to attend the post-graduate medical schools now in operation.

A PRACTICAL TREATISE ON MASSAGE. By DOUGLAS GRAHAM, M.D. New York: William Wood & Co. 1874. Pp. 284. Cloth. Price, $2.50.

It is probable that every physician would be glad to learn from competent authority all that is reliable and useful in regard to massage. It is believed that this is the very best work that they could consult for this purpose. It is certainly so far the best that has appeared in this country.

A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS. By FRANK HASTINGS HAMILTON, A.B., M.D., LL.D. Seventh American edition, revised and improved. Philadelphia: Henry C. Lea's Son & Co. 1884. Pp. 1,095. Sheep.

This is the last edition of this standard work. It is too well known to render any notice of it necessary.

HOLDEN'S ANATOMY: A MANUAL OF DISSECTION OF THE HUMAN BODY. By LUTHER HOLDEN. Edited by JOHN LANGTON. With over 200 illustrations. Philadelphia: P. Blakiston, Son & Co. 1884. Pp. 886. Price, cloth, $5; sheep, $6.

As a practical guide in dissection this classic work is unsurpassed. As an anatomical guide it is equally valuable. There is nothing of its kind that surpasses it.

FOURTH ANNUAL REPORT OF THE NEW YORK STATE BOARD OF HEALTH. Albany. 1884. Paper. Pp. 441.

A very fair, just and creditable production. This city uses 500,000 quarts of milk daily, and only one can in forty is watered. As this gives to New Yorkers only 12,000 quarts of watered milk daily to consume, it will be seen that they ought to value the State Board very highly. New York milk contains less "water" than does any "stock issue" on the market.

A PRACTICAL TREATISE ON THE DISEASES OF THE EAR. By D. B. ST. JOHN ROOSA, M.D., LL.D. Sixth edition. New York: William Wood & Co. 1885. Cloth. Pp. 718.

This standard and unsurpassed work has reached another edition. It is monumental in distinction and far more than monumental in value.

A TREATISE ON THE HÆMORRHOIDAL DISEASE. By WILLIAM BODENHAMER, A.M., M.D. Illustrated by two chromo-lithographs and thirty-one wood cuts. New York: William Wood & Co. 1884. Pp. 307. Cloth, $3.

The author of this book is most excellent authority, and an excellent practical guide on this subject so interesting and important to every physican. It is the only treatise on this subject issued by an American. It is worthy of the author and of this country. Every physician will find it of the greatest possible interest and value. It will be a standard authority.

Diet for Consumptives.—Those interested in this subject—and who is not?—should send to Dr. R. J. Nunn, of Savannah, Ga., for a copy of his valuable and instructive pamphlet.

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## MISCELLANEOUS.

The Sequel of a Memorable Operation.—A few days since Prof. W. H. Pancoast, at a clinic in the Philadelphia Hospital, introduced a young man who was once the subject of a remarkable surgical operation, being the separation of an infant from a monstrosity which was virtually another chaotic fœtus developed from his cheek. The person referred to was G. W. Lytle, a young man of twenty-four, residing at Cornellsville, Pa. His only peculiarity was a deep scar on the left cheek. Dr. Pancoast then gave the class an account of the operation, of which there had been three performed, one each in London, Paris and Philadelphia, and which consisted in cutting apart two children who were congenitally attached. The operation was performed twenty-four years ago, by Prof. Joseph Pancoast, when the young man at the clinic was an infant of seven months. The child was born with an appendage growing from the left cheek, which was nothing else than an imperfectly developed infant, with hands, feet and trunk, but no head. The operation was performed at a clinic in Jefferson Medical College, and was witnessed by many of the prominent physicians of the city. The operation was fully described in the *Medical and Surgical Reporter* by Dr. R. J. Dunglison. It was considered bold surgery, but Dr. Pancoast was confident of its propriety, and accordingly performed it, with what success was shown by the presence of the patient himself, nearly a quarter of a century later. An interesting feature of the operation is its having been performed with the écraseur, then a new instrument, and the first of the kind ever used in America, and brought from Europe by the elder Pancoast. Upon dissection the monstrosity was found provided with heart and gastro-alimentary tract, as well as the organs already referred to. The case attracted considerable attention abroad, and at the request of the eminent English surgeon, Sir James Paget, a cast of the detached mass and a photograph of the child before the operation were furnished to the museum.

Governmental Assininity.—We had thought that a split fowl to the head (warm) for apoplexy, a hair of the dog that bit you to cure hydrophobia, etc., were things of the past; but to prove the contrary, it is only necessary to turn to the Patent Office Record of this Dominion for the month of June. No. 16,845 is entitled a patent for "Improvements in Ointments," and it informs us that the Department has been graciously pleased to grant a monopoly of the following valuable prescription for a term of five years: Claim.—A compound composed of the following ingredients: Fresh unsalted butter, two pounds; *black wool cut from the sheep's breast at the full of the moon*, one ounce; three fresh eggs, and flour of sulphur, two tablespoonfuls.—*Canada Med. Jour.*

Persia as a Health Resort.—The United States Consul at Teheran, Persia, has recently sent to Washington an interesting account of the climate of Persia. He says that it is generally conducive to a high average of health. The low northern districts bordering on the Caspian Sea are the sites of malaria and malarial fevers, by which, however, the natives are scarcely affected; and the neighborhood of the Persian Gulf in the south is intensely hot and relaxing. Otherwise the kingdom generally is salubrious. It consists of an immense plateau, elevated an average of 4,000 feet above the sea, and intersected by numerous lofty ranges, soaring sometimes to 16,000 feet above the sea-level. Eternal snow exists on their summits. The plains are covered with verdure, and watered with streams from the mountains. The winter is short, but characterized by high winds, and in many of the northern parts by violent snowstorms. The spring and autumn are mild and delightful. The summer is hot, but the nights are tempered by cool breezes. By August 20th the cooler weather of autumn commences. At Teheran, during last summer, the thermometer ranged from 90° to 110° Fahr. in the shade, but the air was always dry. In a cluster of villages, nine miles from the city, and 1,300 feet higher, at the foot of the Shimiran mountains, the mercury ranged from 75° to 90° Fahr. in the shade at midday, rarely going above 85°, and falling to 70° at sunset. After becoming acclimatized by the assistance of quinine and the exercise of common sense in general habits, Europeans find the climate healthful and agreeable. Phthisis is extremely rare among the native population. The greatest mortality is among young children, resulting from uncleanness and carelessness in diet. Venereal diseases are widely spread, and tend to perpetuate chronic and hereditary disease, especially affections of the eye. Notwithstanding this, however, the people are handsome, finely formed, and capable of great endurance. With more regard to sanitary precautions, Persia might be regarded as one of the healthiest countries on the globe. With the exception of the provinces above mentioned, it offers no dangers to the health of Europeans who take ordinary care of themselves. It can be especially recommended to those afflicted with pulmonary complaints, provided they do not delay going until the overland journey is too severe for their strength, a precaution too often disregarded by invalids as well as by their medical advisers.

Treatment of Chronic Nasal Catarrh and Bronchitis.—Dr. J. G. Westmoreland, of Atlanta, Ga., thus concludes a paper on this subject in the *Atlanta Med. Register*: "Fumes make the only form in which a remedy can reasonably be expected to reach the small bronchia and lungs, and there is but one article belonging strictly to the class above alluded to which is subject to this form. Rosin, sulphur, etc., when heated pass off in fumes, but they are not proper local alteratives for the purpose; iodine is an active remedy and passes into fumes readily when heated. A simple but altogether sufficient inhaler may be made of a small, wide-mouthed vial, such as is used for holding morphine. When heated, with a few grains of iodine in it, the fumes quickly appear and may be readily inhaled. The inhalation should be made through the nose, if disease exists in the nasal mucous membrane, otherwise the mouth will answer. The inhalation should be repeated in one to three days, according to the amount of irritation caused by the remedy.

The use of mullein as a palliative for the cough of phthisis seems to be meeting with favor in various quarters. The customary form of administration has been a milk decoction of the plant. More recently the smoking of the leaves has been recommended as a more agreeable and effective method of administration.

ELECTROPUNCTURE IN ANEURISM OF THE AORTA.—An interesting observation, by M. Dujardin-Beaumetz, is reported in the *Bull. Génér. de Thérap.* for January 15th. The patient, a man aged 37, had noticed, two months before the operation, a swelling in front of the sternum. The tumor, when first seen by the author, occupied the upper part of the thorax, on the left side of the sternum, and measured seven centimetres in breadth and five in height. The patient suffered very much from dyspnœa and cough. Iodide of potassium having remained without effect, an iron needle, communicating with the positive pole of a Trouvé battery of eight cells, was introduced into the tumor, and the negative pole was placed on the left side of the thorax. The operation lasted ten minutes. Five days later a considerable amelioration was noticed, and a second operation was then performed with three needles. After some days the operation was again repeated a third and fourth time. One month after the first operation the patient felt very much relieved; the cough and dyspnœa had disappeared; the tumor was harder and smaller; and the pulsations were less distinct. Unfortunately, a fifth operation was performed five weeks after the first; but the next day the tumor was found soft, and increasing in size very rapidly. The patient died twelve days after the last operation, but no post-mortem examination could be made.

EXCISION OF RIBS IN EMPYEMA.—M. Lucas-Championnière, in a case of pleural fistula of two years' duration, with a cavity containing five hundred grammes of pus, recently excised eight to eleven centimetres of the fifth, sixth, seventh, eighth and ninth ribs; the operation was followed by considerable improvement. In a discussion on this subject at the Société de Chirurgie, MM. Desprès and Verneuil advised that the operation should not be performed before the thoracic cavity had had time to contract spontaneously as much as possible.

A PERFECTLY-DEVELOPED CHILD WITHOUT A PLACENTA. — Dr. Valentine Browne, M.D., of Yonkers, New York, in a letter to the *New York Medical Record,* relates the particulars of a very anomalous primiparous case, in which labor was complicated with œdema of the lower extremities and violent convulsions, without albuminuria. The age of the patient, a well-formed woman, was thirty-eight. In spite of chloroform and hypodermic doses of morphia and atropine, which at first caused a marked diminution of spasms, the convulsions continued. Repeated efforts to dilate the os with Barnes' bags failed, the uterus being anteverted and the os very rigid. Œdema of the lungs set in, and the patient died. Permission to perform the Cæsarean section was asked before death, but refused. About one hour after the friends requested that the child should be so removed. Dr. Browne accordingly removed the child. We had better give his own account of the remarkable feature of the case in his own words: "I accordingly commenced the operation by abdominal section. On reaching the uterus, careful section of that organ was made, when a fœtus was observed partly immersed in an inky-black liquid. An effort was now made to remove the child, but, as something seemed to hold the fœtus firmly, I inserted my hand into the cavity of the uterus, when I found the cord very rigid and unyielding. Having severed this obstacle, a perfectly-formed male child, weighing about twelve pounds, was removed. Search was now made for the placenta, but without success. There was no placenta. The umbilical cord was found attached to the fundus of the uterus, and the length of the cord did not exceed four inches." Permission to remove the uterus was refused. This is to be much regretted in a case entirely beyond the bounds of previous experience, as far as we know. We are compelled to believe that a more careful examination of the uterus would have revealed some kind of placenta.

Observations on a Decapitated Head.—We transcribe from the *Révue Scientifique*, July 5th, the principal part of a paper by Dr. Petitgrand, giving an account of the observations he had the opportunity of making upon an Annamite who was decapitated at Saigon, in 1875, an account characterized by the editor of the *Révue* as highly important, as furnishing the most precise evidence of the presence of consciousness after decapitation that exists. The man executed was a pirate of robust frame and brave demeanor, and M. Petitgrand concentrated his whole attention upon him. He was placed in a kneeling posture, strongly attached to a solid post in front of him, with the head and neck voluntarily and strongly flexed. The place for the blow having been marked with betel-juice, the head was struck off at one blow by means of a long sword having a broad blade—the procedure to be properly carried out requiring great address on the part of the executioner, and much *sang-froid* on that of the culprit. When this is the case there is of course far less contusion and concussion of the spinal cord than with the guillotine; and, therefore, so far a greater possibility of an ulterior manifestation of the functions of the encephalon. During the preparations Dr. Petitgrand never withdrew his eyes from the culprit, placed at two metres' distance only, and with whom he more than once exchanged looks. The head fell within a metre and a half from him, without, as ordinarily, rolling away, and the divided part of the neck resting on the sand, the hemorrhage which ensued was very slight. At this instant he was startled at finding the eyes of the head steadily fixed on his own, and not believing that this could be an act of consciousness, he rapidly described a quarter of a circle around the head which lay at his feet, and saw plainly the eyes following this movement. He now returned to his former position but more slowly, and the eyes followed him for "a very short instant," and then suddenly ceased to do so. At this moment the face expressed manifest anguish, the poignant anguish of a person in a state of acute asphyxia. The mouth opened violently, as if to take a last gasp of respirable air, and the head, thus displaced of its equilibrium, rolled on its side. This contraction of the maxillary muscles was the last manifestation of life, a period of from fifteen to twenty seconds having elapsed since decapitation. From these facts Dr. Petitgrand draws these conclusions: (1) That the head separated from the body is in possession of all its faculties as long as the hemorrhage is restrained within certain limits, and that the proportion of oxygen dissolved in the blood is sufficient for the maintenance of the nervous function, that is for a short period, which, in any case, would not exceed half a minute. (2) That the repeated convulsive movements of the lower jaw, after the head has become detached—movements which, without doubt, have given rise to the expression, "biting the dust"—are nothing else than the habitual reflex movements of the face in acute asphyxia. These cannot be absent when the little blood contained in the decapitated head flows away or becomes disoxygenated; and are caused by the sensation (probably conscious) of the want of necessary oxygen in the blood remaining in the encephalon. On the present occasion Dr. Petitgrand had no opportunity of observing the trunk of this beheaded man; but he has had opportunities of observing it on other occasions, and has always noted the following circumstances: The head once detached, the trunk (the body being attached by cords to the post is unable to fall) suddenly assumes the vertical position, columns of arterial blood springing up to a metre or more in height. This straightening of the trunk, and the jets of blood being simultaneous, are in fact related to each other as cause and effect; for at each new systole, manifested by the projection of a column of blood, the trunk is raised, to bend again immediately. The jets soon do not ascend to more than a few centimetres, and the movements of the trunk are reduced to mere oscillations. After from twelve to fifteen systoles, all the blood is evacuated and the trunk remains motionless, and as it were suspended to the post, which prevents its falling to the ground. Dr. Petitgrand has never noticed any elevation of the ribs or sinking of the epigastrium, or any other sign of an attempt at respiration. The heart seems to continue to live awhile its own proper life, as shown by its violent systoles, which are capable of effecting the stretching of the trunk.—*Medical Times.*

THE INCREASE OF INSANITY is commented upon by the *New England Medical Monthly.* It states that it is doubtless a fact that the cause of this state of affairs may be found in overeducation or excessive development of the nervous system, upon which the health of the individual so greatly depends. It is in the individual whose central nervous system is impaired by overwork, in the widest signification of the term, that morbid appetites are created most readily, and it is these persons who suffer, in a large proportion of cases, from the effects of the various stimulants and narcotics which have been primarily and too readily employed during these states of nervous exhaustion. High states of civilization seem necessarily to produce a highly-wrought and delicately-fashioned nervous system, which from its very constitution is susceptible to derangement. It does not seem proven, however, that we should necessarily pay a forfeit for high culture. There is abundant testimony to the fact that our methods of education are open to censure. When these are improved upon—when mental work has become systematized and we have learned to make haste slowly, it is then, but not before, that we shall have a satisfactory record to show for our labor.

SKIN GRAFTS FROM A RABBIT.—In a report upon the recent progress of surgery (*Boston Medical and Surgical Journal*), Dr. H. A. Beach records the following: Dr. Lamallerie, of Paris, has recently employed grafts from the skin of rabbits to excite cicatrization in the human subject. The patient had suffered for six years from a varicose ulcer of the leg, which had resisted various sorts of treatment. Six bits of skin from the belly, previously shaved, of a rabbit, and two from the skin of the human forearm, were grafted on the surface of the granulating ulcer, with the proper antiseptic precaution. At the end of eight days the pieces of skin from the rodent had taken root and were growing, those from the man had not. After eight days more an island of new skin was to be seen, ten centimetres long and seven wide, in the centre of the sore. The healing went on to complete cicatrization, and the newly-formed epidermis evinced no trace of its lowly origin.

AN EASY METHOD OF EXTIRPATING SMALL TUMORS AND ULCERS.—Dr. C. Johnson spoke of such a method, very simple, but affording extremely good results. Warts sometimes lead to malignant growths. These and other local affections, as ulcers and skin cancers, may require removal on account of their nature or because of the disfigurement they occasion. Here swiftness and certainty are needed. The knife is objectionable, because it makes a ragged edge and sometimes penetrates too deeply. Dr. J. employs a circular gun wad-cutter, of which there are various sizes. This acts as a trephine and makes a smooth and clean circular incision. The margins can be approximated by silver wire suture, or can be simply treated with carbolized oil and prepared cotton; the latter was most frequently employed by Dr. J. In performing the operation, the cutting edge of the instrument is applied over the morbid growth and a half turn of it is made, followed by another half turn. A tenaculum is now applied to the still attached button of tissue, which, being lifted, is removed by one horizontal sweep of a knife. When upon the cheek a finger should be inserted into the mouth for the support of the tissues while the trephine is being used. The operation requires an anæsthetic, as chloroform, or bromide of ethyl, as used by Dr. Chisolm, or local anæsthesia by ether or ice.—*Maryland Med. Journal.*

On Opening and Drainage of Abscess Cavities in the Brain.—The antiseptic method of operating and after-treatment has not as yet been fully tested in operations upon the brain. This is natural, for not only have we inherited a just dread of dealing with an organ the large majority of whose diseases are dangerous or fatal, but, our knowledge of the physiological functions of the brain and of the pathological modifications being extremely limited, we are not in a position to form such an accurate diagnosis as calls for surgical interference. Drs. Christian Fenger and E. W. Lee, of Chicago, in an extremely interesting paper on this subject, in the July number of the *American Journal of the Medical Sciences*, consider the treatment of traumatic cerebral abscesses, and report a case which was successfully treated by opening and drainage. Bergman, in discussing the treatment of cerebral abscesses, unhesitatingly sets it down as an axiom that wherever there is an accumulation of pus trephining is most clearly and indubitably indicated, for the opening of an abscess in the brain is as necessary as in any other part of the body, and we would add even more so. A correct diagnosis of abscess having been made, the further difficulty presents itself of locating it with sufficient accuracy, so as to be able to find it. A number of cases are on record in which a correct diagnosis had been made, the trephine also put on more or less at the right place, but the knife or trocar being passed into the brain nevertheless missed the abscess. Drs. Fenger and Lee show by their case that this difficulty can be obviated by multiple exploratory aspirations, performed at interstices sufficiently small to prevent any abscess from escaping detection, even if the trephine opening should not have been made at the point of the skull nearest the abscess. There are on record a large number of cases of cerebral abscess in which trephining was performed, pus evacuated, and temporary relief obtained; but later relapse followed, and a fatal termination ensued. It is possible, judging from the success the practice has met with in the treatment of abscesses in other situations, that drainage of the cerebral abscess-cavity, with or without washing out, would have saved some of these cases, by preventing the reaccumulation of pus and the continuous infection of the surrounding brain tissue, the acute œdema of which is well known to be, as a rule, the final cause of death. As far as Drs. Fenger and Lee are aware, draining and washing out of cerebral abscess-cavities have heretofore not been tried ; that it can be effected, and without any detriment to the patient, is shown by their case, the treatment of which they hold strictly conforms to the rational methods of modern surgery in treating abscesses in general ; and because of this, and not because their patient recovered, they regard the case as answering affirmatively the question : Is it probable that abscesses in the brain can be treated advantageously on the same principles as abscesses in other parts of the body?

Complete Absence of Left Kidney.—Before the Sheffield Medico-Chirurgical Society (*Brit. Med. Jour.*, January 20, 1883), Mr. Gubbin exhibited the specimens from this case. The patient, a man aged 24, had been under the care of Dr. Branson, in the Sheffield Public Hospital, where, on November 16th, he had been admitted suffering from anæmia, following a severe attack of hæmatemesis ; the vomiting of blood recurred several times, and he died at the end of a fortnight. The patient had been in India for two and a half years ; he had drunk freely, had had several attacks of ague, and had been discharged from the army for enlarged spleen. At the necropsy, the following condition of parts was found : The liver weighed 2 lbs. 6 ozs., and consisted almost entirely of the right lobe ; the left lobe being represented by a small appendix, weighing a few drachms. Microscopical examination showed moderately advanced cirrhosis. The spleen weighed 2 lbs. 2 ozs., and was tough on section. The right kidney weighed 13 ozs., but was otherwise normal in appearance. The left kidney was entirely absent; there was neither suprarenal capsule nor ureter. There were many pints of clear fluid in the peritoneal cavity. The lungs were healthy. The heart weighed 14 ozs. There was only one ridge and one opening (right) in the bladder. There was no malformation of any part of the genital organs discovered. Mr. Gubbin remarked on the interest attaching to this case, from the absence of the left kidney and suprarenal capsule, as well as the rudimentary condition of the left lobe of the liver; and said that, in 1838, Dr. Brenner (Virchow's *Archiv.*) had collected records of forty-eight cases of congenital absence of one kidney. The removal of a kidney should, therefore, be done only after close examination.

INTESTINES IN THE CHEST.—Mr. C. G. Davis, of Milford, Mich., reports (*Med. Age*) the history of a man, aged 37, who, after suffering from ague and other troubles, finally died of septicæmia. A post-mortem, made in the presence of Drs. Dallas Warren and Robert Johnson, revealed a very dilated stomach, enlarged liver and spleen. Dr. Davis says: "The intestines were the next organs to look for, and by following the pyloric end of the stomach I found it turned upward against the diaphragm, through which I made an opening with the scalpel, and introducing my hand, found the intestines all in the left chest, under the lung and about the heart, resting upon the diaphragm, an opening of about one and a half inches in diameter through the diaphragm, near its left attachment, allowing a passage for the descending colon down to the rectum. The mesenteric glands were found enlarged and filled with deposits of pus, doubtless of pyæmic origin. The left lung was about one-third as large as the right, and divided into five irregular-shaped lobes. Both lungs appeared healthy as to their parenchyma. There were no adhesions of either intestines or the lung to the pleura in the left cavity; some were found on the right side, but they were not extensive. Peritonæum healthy and continuous through the opening in the diaphragm where the colon passed out of the chest. The deformity of the lungs, the misplacement of the bowels and kidneys, must have existed from birth, and were not the result of hernia, as some may be inclined to believe."—*Med. Record.*

PULSATING TUMOR OF THE SPLEEN.—A pulsating liver is frequently met with, and under a variety of circumstances causing the phenomenon; but a pulsating, hypertrophied spleen is a rare occurrence. Such cases have been reported recently by Dr. C. Gerhardt in the *Zeitsch f. klin. Med.*, iv., p. 449. He noted in three individuals, who all suffered from aortic regurgitation, and who are in a febrile condition—the first in consequence of an attack of febris intermittens, and the other two on account of pericarditis—a peculiar pulsation in the hypertrophied spleen; the latter became larger with each systole of the heart, augmenting in size gradually, until during diastole diminution again took place. By auscultation over the tumor, a dull double sound was perceived, the sounds of the heart only at the upper margin. The sensation which was imparted to the fingers of the hand grasping the tumor was not the sharp stroke of an aneurism, but a similar one as we feel when touching a pulsating jugular vein. Pulsation of the enlarged spleen, which undoubtedly must occasionally happen, has never been described as yet. G. ascribes it to the altered blood-pressure induced by the aortic insufficiency, and by the febrile relaxation of the walls of the vessels. When the coats of vessels are in a state of febrile relaxation, then similar phenomena are noted by the spleen, as Quinicke observed them in the skin, where, by rubbing, a red line may be produced which pulsates. This explanation indicates also the rarity of a pulsating spleen-tumor, as first a febrile condition is necessary, and then an aortic insufficiency compensated by a strong muscular left ventricle, the muscular tissue of which has still to be in perfect health, even if augmented in quantity.

Sulphurous Acid in Consumption.—Most readers are aware that sulphurous acid is one of our most important bacillicides, and the more to be recommended as it can be inhaled with impunity. Mr. Julius Kircher, a pupil of Liebig, and owner of a chemical factory in Brooklyn, writes, says the *Medical and Surgical Reporter*, as follows to the *Zeitsch f. d. Oestr. Apoth. Verein:* The observation of Koch has found a brilliant confirmation in my factory, where a large quantity of sulphur is evaporated daily. That in this process a great deal of sulphurous acid is formed, can easily be imagined. During the forty-four years that my factory has existed none of the many laborers have ever been affected by tubercular consumption, nay, more frequently, enough persons in the beginning stages of this disease applied for admittance and were cured within a few weeks, simply by inhaling the sulphurous acid. If not too far progressed, these individuals become strong, stout, and perfectly healthy again. All diseases zymotic in character, even cholera, stay away from his factory and those working there. Persons affected with bronchial catarrh are rapidly cured. Phthisical patients should live in rooms where hourly 1 to 2 drachms of sulphur are evaporated on a warm stove. First eight or ten days there is increased irritation of cough and expectoration ; then these cease, and the individual rapidly improves. Convalescents should live for a time in rooms filled with aromatic watery vapors.

The *Cincinnati Lancet and Clinic* is responsible for the statement that there lives in Porkopolis a physician who, when called to see a case which he does not understand, is habitually seized with a sudden call of nature, and while in the seclusion granted by the haunts devoted to evacuant purposes, he gets out his "little giant crammer" and posts up.—*Ex.*

## MEDICAL NEWS.

The House Committee on the Public Health.—The House Committee on the Public Health has decided that by reason of the late stage of the season and the crowded condition of the calendars, it would be impossible to pass, during this session, such a bill to protect the public heath as was recently prepared by the delegates from the various State Boards of Health assembled in convention at Washington. The Committee, however, decided to recommend the appropriation of $25,000 for the National Board of Health, and $500,000 to be used at the discretion of the President in preventing the spread of cholera, should it appear in this country before the next Congress assembles (Jan. 24).

The annual election of the New York Academy of Medicine occurred January 15th, and the following officers were elected : President, Dr. A. Jacobi ; Vice-President, Dr. C. C. Lee ; Corresponding Secretary, Dr. L. Elsberg ; Trustee, Dr. A. L. Loomis.

Dr. Augustus Van Cortlandt died on the 24th of December, in his fifty-ninth year. Dr. Van Cortlandt was a graduate of the College of Physicians and Surgeons, of the class of 1862. He died at Mount Vernon, Westchester County, in which neighborhood he had lived for a number of years past.

Dr. J. J. Moorman, President of the Board of Trustees of Roanoke College for forty-five years, resident physician at the Greenbrier White Sulphur Springs, and author of several works on the mineral springs of North America, died at his home in Salem, Va., January 22d, aged eighty-four years.

An American Society of Public Analysts was organized in Brooklyn, on the 24th of last month, by the representatives holding appointments under the Boards of Health in the several States of the Union. Its objects will be, by frequent meetings, the discussion and publication of papers, etc., to advance and disseminate knowledge regarding adulteration of food or drugs, to secure uniformity of results, and to provide for efficient sanitary control over the food supply.

The annual product of cocoa in South America is estimated at 40,000,000 pounds.

The British Gynæcological Society is the title of a new society recently organized in London. Its first officers are: Honorary President, Dr. R. Barnes; President, Dr. Alfred Meadows; Vice-Presidents, Drs. Aveling, Bantock, Kidd, Routh, Simpson, Profs. Smith and Tait; Secretaries, Drs. F. Barnes and Heywood Smith.

The University of Heidelberg will soon celebrate its five hundredth anniversary.

Another Medical Centenarian.—Dr. O. S. Taylor, of Auburn, N. Y., completed his one hundredth year on December 17th. He graduated from Dartmouth College in 1809, and from the Medical College in 1813.

Dr. Ludwig Senff.—Dr. Ludwig Senff, resident physician at the Montefiore Home, died at Mount Sinai Hospital, N. Y., on January 21st. The cause of death was chronic Bright's disease.

College of Physicians and Surgeons.—The land lately purchased for the College of Physicians and Surgeons, New York, comprises the western portion of the block bounded by Ninth and Tenth Avenues and Fifty-ninth and Sixtieth Streets, directly opposite the grounds of the Roosevelt Hospital, which include the whole of the block below. It is understood that the new college building will cover a space measuring two hundred by three hundred feet.

The Disappearance of a Physician.—Some weeks ago Dr. Richard C. Brandeis, a promising and highly-esteemed young physician of this city, disappeared, and, at the time of going to press, no indication of his whereabouts has been found. He was in delicate health, and the fear is entertained that he may have done himself harm while under the influence of a mental aberration. He was formerly a citizen of Louisville, Ky. The family offer $1,000 for his discovery.

The death of Dr. George H. Atkinson, of Brooklyn, took place December 27, as the result of blood-poisoning contracted in the practice of his profession. Dr. Atkinson was a graduate of the Long Island College Hospital, of the class of 1873, and a member of the Medical Society of the County of Kings and of the Brooklyn Pathological Society. He took a prominent part in the proceedings of those societies, and was regarded as in every way a most valuable member of the profession.

The New York Young Men's Christian Association, in a recent debate, decided that "physicians should be Christians." The *Springfield Union* agrees to the decision, but thinks it is a mistake to draw the line at physicians: their patients should be included. Note.—And subscribers to journals.—Ed.

MUD BATHS.—Cincinnati has a Medical Mud Bath Company which has opened a bath house for the purpose of enabling Cincinnati rheumatics to have the mud bath treatment at home. This is a blow at Hot Springs, Arkansas.

DR. THEODOR MEURER, of New Albany, Ind., died on the 24th of December, 1884, in his sixty-third year. The diseased was a native of Saxony, but had practised in New Albany for twenty-eight years.

A SEWAGE-BESIEGED CITY is the name given by the *Boston Medical and Surgical Journal* to Providence. The city is now called to pay the bitter penalty which time lays to its charge for the practice of casting its sewage into the nearest watercourse. The price of reform is estimated at $3,500,000.

DR. HENRY A. MARTIN, widely known in connection with vaccination, died on the 7th December, at his residence, Boston Highlands.

COCAINE.—The *Berliner Klin. Wochenschrift* of December 15 quotes experiments made by Dr. Anrep, of St. Petersburg, in 1879, at Würzburg, and published in Pflüger's *Archiv*, 1880, in which insensibility to needle-pricks was caused both in the skin of the arm and the mucous membrane of the tongue by injection and penciling respectively. In the *Journal* of December 6, page 1,132, it was mentioned that Dr. Koller had referred to Dr. Anrep as having first pointed out the anæsthetic action of cocaine. Professor Jurasz, of Heidelberg, thinks that cocaine is destined to play the same part in laryngoscopic surgery as chloroform in surgery generally. In one case, the removal of a polypus from the left vocal cord was attempted by its aid; but vomiting was induced, owing to the patient having recently taken food. Next day, however, the patient fasted, and the operation was easily effected. At 4.1 P.M. the fauces were brushed with a 10 per cent. solution, which at once rendered easy the laryngoscopic examination. The trachea was then brushed three times with the same solution, and at 4.6 the forceps was introduced and the polypus removed without any spasm of the muscles and without any sensation on the part of the patient. Dr. J. R. Uhler, of Baltimore, writes to the *Maryland Medical Journal* that he has found a solution of hydrochlorate of cocaine applied to the vulva mitigates the pains of labor. Dr. W. Oliver Moore writes (*New York Medical Record*) that in eye-surgery cocaine is six times cheaper than ether, as two drachms of a 2 per cent. solution lasts for twelve operations, and costs a dollar and a half; ether for the same would cost from nine to twelve dollars. Dr. H. G. Sherman, of Cleveland, has successfully used cocaine as a local application for tinnitus aurium. A patient suffering from chronic otitis media, who had long been treated by all known methods, came to him suffering intensely with noises in the ears. A 4 per cent. solution of cocaine was instilled into the ear. Tinnitus and deafness were lessened. A second case was tried, with similar results.—*Ex.*

DR. JAMES DUNN, one of the oldest and most prominent physicians of Virginia, died in Petersburg January 20th, after a lingering illness. He was fifty-four years of age. He was a native of Petersburg, and was graduated in medicine at Philadelphia and the University of Virginia. He also attended medical colleges in Paris. During the late war he was one of the leading surgeons in the Army of Northern Virginia.

DR. CHARLES W. SHUMWAY died January 18th, at his residence, No. 72 Ashland avenue, Chicago. He was born in Essex, Essex County, N. Y., February 5, 1826, and received his early education in his native town.

Dr. O. W. Holmes.—The February number of the *Century* will contain an article on Dr. Holmes by Mr. Stedman. It will be illustrated with a full-page portrait, made from a daguerreotype taken in early middle life.

Dr. D. Bryson Delavan has written a "Social History of the Eighth International Medical Congress, held in Copenhagen, August, 1884." D. Appleton & Co. have published it in a bound volume of 36 pages. It is excellent.

Extreme Old Age.—The oldest person in the State of Wisconsin, John Jondro, aged 121 years, died on Saturday morning, November 29, 1884, at Arkansaw. Mr. Jondro was born in the parish of Phillip, near Montreal, in 1763. He was in the employ of the Northwestern Fur Company forty years, and during the last forty years he has lived in this neighborhood. In his younger years he served some time in the Federal army, and often related interesting tales of army life. His age is taken from the statement of the parish prelate of Phillip.

Holloway's Great Gift.—The woman's college of this great quack is now nearly finished. The buildings are five hundred feet long and over three hundred wide. Five million dollars given away.

Bust of Dr. Sims.—At the meeting of the New York Academy of Medicine, held October 16, 1884, Dr. H. Marion Sims presented a life-like and striking bronze bust of his father, the late Dr. J. Marion Sims, which he had had cast in Paris from the marble bust made some time ago by the French sculptor, Du Bois.

Messrs. Wm. Wood & Co., have issued the very important announcement to the medical profession that they have for years been organizing and preparing for a work differing from all others issued, which will be entitled a "Reference Hand-book of the Medical Sciences," and which will consist of a collection of all the important topics belonging to the broad domain of medicine. It will be limited to six or eight splendid royal octavo volumes, thoroughly well illustrated, of about 800 pages each. To be sold, by subscription only—per volume, in cloth $6, leather raised bands $7, extra Turkey morocco $8. The editor of the Hand-book will be Albert H. Buck, M.D. The contributors are all well known to the profession. Dr. Buck is well known as the American editor of "Ziemssen's Encyclopœdia of Medicine" and "A Treatise on Hygiene and Public Health," both published by Wm. Wood & Co.

New York Pathological Society.—The following officers have been elected for the ensuing year: President, Dr. John A. Wyeth; Vice-President, Dr. George L. Peabody; Secretary, Dr. Wesley M. Carpenter; Treasurer, Dr. John H. Hinton; Editor of Transactions, Dr. John A. Peters; Assistant Editor, Dr. Frank Ferguson.

The *United States Medical Investigator*, a leading homœopathic medical journal, says: "Homœopathy has no recognized position in general medicine at all." [And none among those who term themselves homœopaths to deceive the Public.—Ed.]

Dr. Ambrose L. Ranney, Professor of Applied Anatomy in the Post Graduate Medical School of this city, has been appointed to fill the Chair of Anatomy in the Medical Department of the University of Vermont, rendered vacant by the death of Professor Darling.

New Advertising Device.—A British pill manufacturer has sent 10,000 handbills concerning his business to General Wolseley, with a check for £150, the handbills for distribution among the soldiers, and the money to be paid to the one who shall first post one of the bills upon the door of Gordon's palace at Khartoum. The man of pills also agrees to advertise the name of the winner in every paper in England.

Henry C. Lea's Son & Co., medical publishers, of Philadelphia, have in preparation "The American System of Practical Medicine," to be comprised in five imperial volumes of about 1,000 pages each, the first volume to appear February 1st., and to be for sale by subscription only. Price per volume, cloth $5, leather $6, half Russia $7. This work will be edited by William Pepper, M.D., LL.D., Provost and Professor of Theory and Practice of Medicine and of Clinical Medicine, University Pennsylvania, assisted by Louis Star, M.D.

The Invincibility of Pneumonia.—Mrs. Myra Clarke Gaines died at 10:10 o'clock January 10th, at 150 Walia street, New Orleans. She was taken sick December 27th, her seventy-eighth birthday, of pneumonia and congestion of the lungs. She said to the last that she would not die, having too much work to do in the recovery of her property.

Competitive Examinations.—At a recent competitive examination held at the New York Academy of Medicine by the Medical Board of the Civil Service Commission, in which there were fourteen applicants for two positions at the Hudson River State Hospital, of Poughkeepsie, Dr. Frederick Peterson, of Buffalo, obtained the position of first assistant, and Dr. Charles E. Atwood, of Ithaca, that of third assistant.

Gen. Grant in Better Health.—Gen. Grant is improving daily, and the pain in his mouth, which has given him so much trouble since last summer, and caused the circulation of a rumor that he is suffering from a cancer of the mouth, has been greatly relieved. The General is cheerful and comfortable, and spends a great part of his time at home writing the history of his military life, which is to be published by a prominent House as soon as it is completed. Dr. Fordyce Barker, the General's family physician, says: "Gen. Grant's health has improved very much, and the swelling in his mouth, which made it painful for him to talk or eat, has subsided in great measure. His personal appearance is improved, and he seems cheerful, and is working closely on the preparation of his book. He has a faculty of making his statements clear and forcible which is unusual, and the book will be a remarkable one. Some eight or ten weeks ago the General was suffering extremely from a swelling, accompanied by great pain, in the back of his tongue. The appearance of the tongue was such that I sent him for local treatment to Dr. J. H. Douglas, who had treated such a case of mine before, greatly to the satisfaction of my patient and myself. In connection with the main trouble the General also had a very bad tooth, which was irritating the tongue, and causing great pain whenever that organ was in use, either in deglutition or articulation. The tooth was extracted, to the great relief of the patient. Then his smoking, in which he had been accustomed to indulge all his life to excess, seemed to locally irritate the tongue, although he was not conscious of its affecting his general system. We therefore advised him to cut down his smoking to the first half of three cigars a day, as we thought it probable that it was the nicotine which accumulated in the last half of the cigar that produced the irritation. He followed the advice for perhaps a week, and then gave up smoking entirely, apparently without the least disturbance to his nervous system, without loss of sleep, and without effecting any change whatever in his general condition. This was remarkable, as he had been smoking from 12 to 15 cigars a day. The improvement in his condition since then is marvelous. Under treatment by murate of cocaine not only has the pain greatly diminished, but the capillary congestion of the tissues has in a large measure disappeared."

DR. KNAPP'S GEOLOGICAL SPECIMENS.—Dr. James Knapp's geological cabinet, which is variously estimated to be worth from $6,000 to $10,000, is to be distributed throughout the various medical and literary colleges of the country. At the time at which the doctor was taken sick he was forming a special collection for a college in New York State. The collection will, however, be forwarded by Prof. Green, of New Albany, Ind., at an early date. This seems to be in perfect accord with the practice of Dr. Knapp, who has during the past 25 years supplied a number of medical and literary colleges of the country with specimens which, in the aggregate, would more than stock a geological museum. The exact manner in which the disposition of the specimens will be made throughout the country has as yet not been determined upon. The collection, scattered throughout every room in his office residence on Main street, will probably comprise not less than 100,000 specimens, ranging from ocean insects a trifle over a millimetre in diameter up to the tooth of a mammoth. Dr. Knapp is also said to have expressed a desire that a collection be placed with the Central Park collection in New York City, to be known as the "Knapp collection."

WHO MAY BE HEALTH OFFICERS.—ALBANY, N. Y., Dec. 16.—The Civil Service Commission has issued the following: By decision of the courts the health officers appointed under the general act for the preservation of the public health are State officers. They are, therefore, subject to the Civil Service rules. The statute requires that health officers shall be competent physicians, and the importance of their functions in regard to the public health will now be more generally recognized in view of the probability of an epidemic next year. The Civil Service Commission has had this important matter under consideration for several weeks, and has sought the best information obtainable. At its session today the following was unanimously adopted: Regulations for the Examinations of Health Officers.—For the purpose of providing for the selection of competent physicians as health officers, pursuant to the statutes for the preservation of the public health, there shall be a State Board of Examiners, consisting of five physicians, to be designated by the Commission, who, subject to the supervision of the Commission, shall prepare the examination papers, and, after the examination of applicants, shall pass upon the standing and fitness of the persons examined as shown by the papers, and report the result of their examination to the Commission. The examination papers, when prepared, shall be printed and transmitted to the County Judge of every county where examinations are to be held, and the examination shall be before and under the supervision of the County Judge, who, when the examination shall be completed, shall immediately transmit the papers to the Commission at Albany.

THE EUCALYPTUS TREE, which has been in favor for its anti-malarial properties, has lately lost favor in the province of San Pedro, Brazil, from the belief that it stimulates the generation of a poisonous dragon fly, which attacks all living creatures, to whom its sting is fatal within a few minutes. The destruction of all eucalyptus trees has, therefore, been ordered in San Pedro.

THE *Boston Watchman* says that within the last nine years, nearly eight hundred churches had been burned in America, mostly through defective heating apparatus.

A Flourishing Society.—The Society of Medical Jurisprudence and State Medicine met January 8 in the Academy of Medicine, at No. 12 West Thirty-first street. The annual report of the Board of Trustees showed that the Society was in a good financial condition. The president-elect for 1885, Dr. F. H. Hamilton, in his inaugural address indicated that this society had supplanted the defunct Medico-Legal Society, and he opened the discussion of a paper written by Amos G. Hull on the "Evidence of Experts."

A Wife Uses Croton Oil.—Philadelphia, January 23.—Alexander Harvey, late a Justice of the Peace of Gloucester City, N. J., is the defendant in an action brought by his wife for alimony on account of alleged desertion. Mr. Harvey is 6 feet in height, weighs 200 pounds, is handsome, of fine physique, and a sort of gigantic Apollo. His wife is quite small. The case will be ultimately heard by the Vice-Chancellor of New Jersey. The defence offered to the wife's charge is quite novel, and is without precedent in divorce proceedings. The defendant alleges that he left his wife for justifiable cause, claiming that for a period of fully one year she kept him in a state of constant physical pain by the application of croton oil to his undergarments, and that when this oil came in contact with his skin and was subjected to friction it acted as a torture, especially when walking. When in a state of repose his misery was not so keen. Mr. Harvey was a club man and was frequently out, as his wife alleges, in the evening. After the application of the croton oil he was always at home at night and was a peculiarly submissive husband. But for the fact, as he alleges, that his wife revealed the secret of his tortures to a number of married ladies whose husbands were also members of clubs, the cause of his physical sufferings would probably have never been ascertained. He had consulted physician after physician, and they were not only unable to temporarily relieve him, but wholly at sea as to the cause of the eruptions which showed themselves on his body. Testimony was taken this week before Alfred Hugg, late City Solicitor of Camden and Master in Chancery, and the testimony of the druggist who sold Mrs. Harvey the croton oil and of the physician who treated Mr. Harvey had been recorded.

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## EDITORIALS.

Volume XL.—This is the first number of the fortieth volume of this Journal: the commencement of its twentieth year.

It is proper to state these facts, as the present number will be seen by many who have not seen previous issues, and who, perhaps, have never seen a copy of the work. For the same reason it is best to say, for their benefit and information, that the corps of contributors for the present year will be equal in strength and value to that of any corps of writers associated with a medical periodical at home or abroad. It is best to mention the names of a number of them as they are in turn remembered: Drs. Fordyce Barker, T. Gaillard Thomas, Austin Flint, A. Loomis, L. A. Sayre, F. N. Otis, A. Jacobi, Ephraim Cutter, C. R. Agnew, of New York; Wm. Goodell, J. Solis Cohen, Philadelphia; J. J. Chisolm, H. P. C. Wilson, J. J. Caldwell, Baltimore; S. C. Busey, W. R. Taylor, Washington; A. Reeves Jackson, J. S. Kiernan, Chicago; A. N. Byrd, Quincy, Ill.; Joseph Thompson, A. B. Cook, Kentucky; C. N. Mastin, Alabama; Wm. N. Doughty, J. McF. Gaston, Georgia; Hunter McGuire, A. M. Fauntleroy, J. Herbert Claiborne, Virginia; W. W. Dawson, Ohio; A. Y. P. Garnett, D. C.; Edward Warren (Bey), Paris; etc.

These are the names of those who have promised to give increased value to the next volumes of the JOURNAL. Of course, as has always been the case, valuable papers will be received from many able writers whose names are not as yet known to the editor.

The departments of Original Abstracts and Translations will be represented by the same able writers who at present conduct them, while the remaining departments will be conducted with care and fidelity. The News Department will receive, as usual, careful attention, and all new works will be promptly announced and carefully reviewed.

Such, in brief, is what should be stated for the information of the supporters of the JOURNAL. It only remains for the editor to thank the Profession for their support of twenty years, and to promise as good a JOURNAL as he can issue.

THE NEGRO IN THIS COUNTRY.—The negro has always been an ethnological study of great interest to American physicians, not only because of the relations borne by him to the order of creation, and, as some believe, to the chain of "development," but more particularly on account of the relations of the negro to the people of this country.

Before the war, when he was of interest especially as a physical laborer, the American physicians were chiefly concerned in a study of his anatomical and physiological nature; but now that the negro has been elevated to the status of a citizen, his mental and psychical powers, developments and possibilities become the subject of important and interesting study. As an integral part of the population of a great country, invested with most important rights and new privileges, a possible force in national development if properly guided and aided, and a possible cause of unspeakable, indescribable injury to the political economy of this country if he be unjustly treated or improperly directed, those who think must be unavoidably, inalienably interested in the negro of the United States.

If he is to be a useful, beneficial factor in the great citizenship of this country, all must admit that this result can only be obtained by elevating him from the position or role of mere brute force to the plane of a thinking producer and social conservator, by giving to him, that is to say, all of the education which it is proper for the State to bestow.

Can the negro receive such education? Can he assimilate such knowledge, as an individual and as a race, and give results manifested by other civilized races?

Has the negro that physiological force, that psychical organization which can be successfully used as a soil, in which to plant those seeds which, when planted among other races, bring forth the actual fruits of civilization?

Of course, all who know anything of brain development know that the brain of the most highly-educated races differs very widely from the brain of human beings who have not been subjected to the developmental forces of education. In the brain of those races most highly educated, the convolutions are more numerous, the sulci are deeper, the gray matter more abundant, the force of intellect is stronger and more developed; while in those races less educated, the brain is less developed, and naturally possesses less intellectual force.

Those, therefore, who claim that a race like that of the negro in this country, a race so far in the very infancy of education, is the equal, or can be the equal, in brain development, brain force, brain possibilities of races who have for centuries been cerebrally cultivated and developed, have not learned as yet the very alphabet in the literature of this subject—they really know nothing; are reckless in speech, in prophecy, in assertion, and even in action. They can only be put courteously aside as unworthy of attention.

But to those who really are fully cognizant of the effects of education on the material weight and the physiological development of the human brain; who know that civilized races represent in cerebral development the results of the study of individuals of the race; that as the individuals of a race are more numerously and thoroughly educated. the brain of that race becomes higher in the scale of powers and development, to these the question is asked, can the negro of this country, whose brain, as a race, has until within two decades been practically uncultivated—can he be so educated as to represent, to bring forth the fruits of civilization?

Of course no one but a madman, or what is the analogue of a madman, a fanatical negrophilist, would expect or would claim that the brain of the American negro could produce intellectual results equal to those manifested by races whose brains had been cultivated for centuries, for this would be claiming for an inherently weaker power a force equal to that of a stronger power. But, taking the American negro as he is to-day, with his brain in a racial sense comparatively undeveloped, can he be so educated and civilized as to justify the State in popular taxation for obtaining the means wherewith to effect such a result? And if it be the conviction of physicians and of all qualified by special education and experience to judge of these questions, that the negro can be thus educated and that States and communities are justified in making the necessary outlay for this purpose, what shall be the nature and extent of the education thus attempted? Shall it consist of an education in the primary branches of study, or shall the attempt be made to educate the negro in the higher, even the highest branches: in science; in the learned professions? Shall the creature of undeveloped brain be asked, be required to carry the mental load imposed upon those of the most highly-developed brain; and imposed so often, even upon these, with inadequate results? Shall the missile of the Armstrong gun be introduced into the chambers of a Colt's revolver? Can it be done? And if so, could this weight be lifted, brought forth and used? Can the undeveloped brain carry and utilize and reproduce the intellectual material which is enough, often more than enough, for the brain of the most civilized races? If so, the negro must be not only the equal but the superior of the civilized races, for these have required, for a brain development adequate to the higher demands of modern civilization, an intellectual culture, a severe study, lasting consecutively throughout the entire periods of modern history! Surely it is injustice to the negro to ask that he should perform an impossibility; to master with an undeveloped brain intellectual problems and intellectual facts which are mastered only by the best brains of the best civilized of the races.

That in time to come the negro, if he be continuously educated through generations, yes, through centuries, may attain a brain development adequate to the mastery of the learned professions and of science as these exist to-day is probable; some may say is certain; but whatever may be the truth as to the future, the truth in the present is, that the negro of this country, as he stands to-day, is totally unequal to the mastery of those problems in science which are mastered only by the most highly-developed brains among the most highly-cultivated of the races.

Of course, no one doubts or disputes the well-known fact that some few negroes, male and female, forming conspicuous exceptions to their race, do accomplish mental triumphs, mental feats, fully equal to those accomplished by the higher races, but these cases are exceptional; they are demonstrably so; confessedly so; the lesson stands in science, in human records, even in contemporaneous experience, that this has always been the case in every race, and always will be. But such facts do not affect the rule, the absolute law, that the brain is developed only by brain work; that such work only, and even through centuries, can bring the brain up to the development manifest in the brain of the most highly-educated races. And the law is equally manifest and unchangeable that it is only such brains which are competent to master the problems of modern science and the learned professions of modern times. Those who have not this power cannot wield or carry this weight.

Such is the teaching, the deductions of modern science; in physics, in physiology and in psychology, man's experience has always been and must always be in accordance with these laws, with demonstrable truth.

It is extremely interesting to find just at present a number of illustrations of the truths thus advocated; illustrations which will be read with great interest and satisfaction; for who that loves science does not rejoice to see its teachings made manifest truth?

The problem of educating the negro has been attempted in many countries, and at different periods, but never before has the experiment been made so extensively, so generously, so thoroughly, so faithfully, as has been done in the State of North Carolina during the last twenty years. This noble State has outstripped all others in this humane and highly-respected work. And while those who have known the negro best, who are his best friends, and are most true to him (that is the people of the South), have always asserted that the negro has been most protected in the Southern States, and always would be, receiving and enjoying there a genuine kindness in place of a sentimental philanthropy, it is a great pleasure to find, in the North Carolina education of the negro, one of the many proofs of this assertion.

In North Carolina there are now the following educational institutions devoted exclusively to the negro race. They have been established "since the war," or, as a negro once said to the editor, "since freedom broke out," and they are now in active and successful operation. These are the Bennett Seminary, for both sexes, at Greensboro; the Scotia Seminary, females only, at Concord; Biddle University, males only, at Charlotte, and Shaw University, embracing the Estey Seminary, for both sexes, at Raleigh. Besides these, the Episcopalians have a school at Raleigh, and the Zion Methodists have the Zion Wesley Institute at Salisbury. This latter is managed entirely by colored men; the others principally by white professors.

These schools, colleges and universities offer very many interesting facts for study, but the facts are too numerous, and often too inappropriate, for analysis in a medical journal. It is well to mention that the Shaw University is the largest institution for the education of the negro in this country. It is at Raleigh.

The work of this university was begun under the auspices of the American Baptist Home Mission Society in December, 1865. President Tupper opened the first Sunday-school at Camp Holmes, near Raleigh, in that year, under an old pine tree. In 1884 he presided over an institution domiciled in six large buildings, scarcely surpassed by any in the State. The whole school property is valued at over $150,000. Shaw University has industrial, normal, academic, theological and medical departments, to which a law department will be added. There is a medical course of four years, an A.B. of four, a B.S. of four, a normal of three, and a theological of two. In 1883–1884 there were 429 students in attendance—244 males and 185 females. The classical course had 48, medical 21, theological 55, scientific 18, normal 320, model school 25, young men in mechanical department 120, young men in other industrial departments 100, young women in sewing and dress-making 120, young women in domestic arts 140. The students last year paid $5,000 in tuition by labor in the industrial departments.

Governor Jarvis, who, like ex-Governor Vance, is a great friend of the negro, fosters Shaw University in every way possible. There has recently been added to it a medical department, and this enjoys the great advantage of having in its Faculty those distinguished and accomplished physicians, Drs. E. B. Haywood, A. W. Knox and James McKee, of Raleigh, N. C.

The experiences of the teachers in these institutions are, of course, interesting and varied, but the views of the principals, or presidents, may be assumed to reflect very accurately the convictions as to the result of their great experiment—the teaching of the negro.

One writes as follows:

"They rapidly acquire a smattering of the three R's, and wherever the acquisitive faculty is largely in demand, have succeeded remarkably well. However, when the logical powers are brought into requisition, there has been a lamentable falling off in zeal and acquirement. This mental defect is doubtless due to race disadvantage in the past, and to it is to be attributed the average negro's failure to obtain more than the rudiments of an education, as well as his eminent satisfaction with so much."

The Rev. S. Mattoon, D.D., president of the university, thus writes in reference to Biddle and the education of the negro:

"I took charge of Biddle University as its first president in 1870, and in June, 1877, we graduated our first class from a full collegiate course. We have sent out a small class from the full course every year since. For those from whom we draw our pupils we not only *must have a preparatory, but a sub-preparatory department.* Of course it is only a small minority of our students who take the full course. Many take only a normal English course, and some of our theological students do not take a full course of Latin, Greek and Hebrew. You ask my views as to the capacity of the race for education. I believe in race culture as well as in individual culture, and it could not be expected that the African could take an equal stand with the Anglo-Saxon after a thousand years of training. Out of a large number of whites and blacks, a much larger number of whites could undoubtedly take a high education. But we have had many pupils who could have gone into any class in our white colleges, and have held their own with white students. Blacks have been to Harvard, Yale, Brown and other Northern colleges, and have stood near the head of their classes. We have ministers who have taken full courses, and are keeping up their Greek and Hebrew, and are improving year by year."

A letter from the Rev. Wilbur Steele, who has had control of Bennett Seminary for four years, gives the following view as to the success of the attempt to give the negro a higher education:

"Your question, 'Do you consider the attempt to give a *higher* education to the colored race at present a failure or success?' must of course be answered with reference to its emphasized word. Understanding it so, I am prepared to say that, in my judgment, *as a race*, they are totally unprepared to profit by a college education. Some few, in spite of their ignorant parentage and unfavorable surroundings, I find, will as greatly profit by the best advantages as would any youths. We are preparing two such to go next fall to Boston University, one of the most liberally-founded institutions in the world. *As a race*, they have reached the point where for a decade or two they will most profit by grammar-school instruction."

More of such testimony could be given, but it is unnecessary to duplicate or to reduplicate, and there is not space for this. Enough has been given to illustrate the truth of what has been always taught and claimed by science, viz., that the brain of a race must be developed by continuous study, through many generations, to enable it to master the demands made upon it, by the highest forms of education represented among the most civilized races.

It is evident, therefore, that the efforts and attempts to give the negro race in this country the highest forms of education, before the brain of that race is sufficienty developed by generations of study to receive and assimilate such instruction, is a great blunder; a blunder declared by science, and admitted by the highest classes of minds which have failed in the attempt. Better by far to give the negro in this country, as a rule, that form of education which is all that he can master in his present degree of brain development: a primary education. Give this freely, generously, universally. Both for the good of the State and the negro race, let the negro enjoy all of the educational advantages possible. But do not fritter away money received by taxation, for this purpose, in the vain attempt to load the negro brain with more than it can carry. Be wise as well as kind; be judicious as well as philanthropic; and thus will there be done that which is best to be done for that interesting ethnological being, "THE NEGRO IN THIS COUNTRY."

SIMS' "STORY OF MY LIFE."—The *Pennsylvania Medical and Surgical Reporter* for January 3d, 1885, in reviewing this book, uses language which all who respect the distinguished dead author and the journal named will much regret.

After speaking of Sims in language most uncomplimentary, the reviewer says :

> "The medical reader will turn with the greatest interest to chapter xiv., in which the writer describes the progress of his discovery of the operation for vesico-vaginal fistula. It is told with all his usual realism of description, and *with a remarkable poetic license of the imagination.* Those who are acquainted with medical history know perfectly well that Dr. Sims did not originate the operation, nor *did he even introduce any important movement in it. The silver suture, the shot fastening, the method of exposing the lesions—all these had been practiced and published before the date of his asserted discovery of them, and if he did not know of them, it was because he had not read the current literature of his profession.*
>
> "We do not wish to detract an iota from any just claim of Dr. Sims', but we are equally unwilling that he or his admirers should detract from the just claims of others.
>
> "The history of this operation has been published in various quarters, and in its general introduction and popularization, Dr. Sims did a master's work, and one that cannot be too highly praised; but his claim to having originated it must be regarded as a case of self-delusion, or unconscious memory."

Every one knows that Sims never claimed to have *originated the operation for vesico-vaginal fistula:* never once in conversation, debate or literature. He does not make this claim in his book, directly or indirectly. On the contrary, he says that before he ever attempted to operate he examined the literature of the subject thoroughly. He even quotes the method of his predecessors.

He did, however, re-originate the method of making a vaginal examination in such a way as to render operations on the vaginal walls practicable, and the operation of vesico-vaginal fistula feasible. He claimed no credit for this. He even frankly describes how it all happened, and how the principle of his speculum was first revealed to him.

As to the use of shot, he never claimed to have first used this on the wire. The same may be said of the button. He did not, nor does any one attach the least importance to these unimportant details.

The review named is very unjust, and the statements in regard to him are untenable.

When it is well known that before Sims' use of his speculum and the silver suture the operations on the vaginal walls were so generally failures as to be avoided and repudiated by the very best surgeons, and when it is equally well known that, on account of the methods adopted by Sims, these operations are now the most successful in surgery, how can a reviewer having the smallest respect for justice, for the dead or for himself, deliberately write that Sims "did not even introduce any important improvement in the operation?"

Such statements are most unjust and untenable; they are even a libel upon the distinguished dead.

It is true that two hundred years ago, by means of a speculum, a vesico-vaginal fistula was exposed in Holland and sutures applied to it; it is true that Levert, of Mobile, Ala., in 1829, had used the silver wire in surgery; it is true that Mettauer, of Virginia, in 1847, had used lead sutures successfully in closing a vesico-vaginal fistula; it is true that Haywood, of Boston, before 1840, had closed this fistula with silk suture; it is true that Gosset published in the *Lancet*, as early as 1834, his method of dealing successfully with this fistula, and that he used silver wire, the genu-pectoral position and the speculum; it is true that Metzler, in 1846, used a speculum like that of Sims, with metal wire, and even the clamp suture; it is true, finally, that others may have used the speculum, the wire and the position advocated by Sims; but can any fair or truthful man say that these facts render less true the statement made by Sims, that when he first became interested in the subject, he could not find any record of a successful method of dealing with a vesico-vaginal fistula; that the speculum called by his name was discovered by him; that silver sutures were, as he supposed, first made by him; and that the position indicated was suggested by him?

Emmet, who certainly is fair and just to all, and who is competent to be a judge in this matter, says: "From Dr. Sims' hand the operation was accepted by the Profession; what had been done fell on barren soil, bore no fruit, was not appreciated, and was destined to be forgotten." This language is plain enough and strong enough, but he uses language still more forcible, viz., "To J. Marion Sims the world is indebted for *suggesting and perfecting* the measures by which this formerly almost intractable condition is rendered one of the most certain of relief within the field of surgery,"

With such competent testimony on record it would have been bad enough for a foreign author and a foreign periodical to seek to rob the dead Sims of his honors, but for an American physician and an American journal to so act is libelous and inexcusable.

INSPECTION OF FOOD AND DRUGS.—The Massachusetts State Board of Health, Lunacy and Charity (*Times*) has published the first annual report of the work done under the recently enacted laws, of that State, relating to the adulteration of food and drugs. The reports of this Board have deservedly attracted much attention. The very interesting results of an inquiry concerning the use of arsenic in wall papers of all colors, children's toys, etc., made under the direction of the Board by Dr. Wood, of the Harvard Medical School, has been published. Dr. Wood is one of the chemists employed to analyze food, and a part of the work required under the laws was done by him. The Board is authorized to expend each year $10,000 in enforcing the law relating to adulteration, but at least $3,000 of this sum must be used in the analysis of samples of milk, cheese and butter, and the prosecution of dealers who sell milk or milk products that are not fit to be used.

For this reason much space is given in the report to the results of an examination of the milk supply, and these results are not uninteresting, for the reason that a large share of the milk product of Western Massachusetts is sent elsewhere. The law requires that milk sold in the State shall contain not less than 13 per cent. of solids. The milk analysts examined, in Eastern Massachusetts, 241 samples, of which 186 were adulterated. Only two out of forty-nine samples taken in Boston were up to the standard. It appears that adulteration is not so common in the western counties. Several dealers have been convicted and fined. But while a sample of milk may yield under analysis the required amount of solids, it may be utterly unfit for use as food, owing to the kind of feed used, and to a disregard of sanitary laws in the care of the animal. For example, the chemist found that requirements of the statute were met by milk produced by a herd largely selected from condemned animals, overcrowded in filthy stables, fed with brewers' grains, and watered with a vile fluid pumped from a well driven through a pool of liquid manure. Something more than chemical analysis is required to protect the consumer from those who sell this stuff. The board condemns the use of brewers' grains, and declares that cholera infantum was unknown in a town near Boston until this kind of feed was substituted for pasturage and wholesome fodder. The analysts declare that inspections made by means of the lactometer are almost worthless, except in cases of the grossest fraud.

The examination of samples of butter does not appear to have been thorough Of twenty-one samples four were condemned, but others are described as "more or less adulterated with oleomargarine." The samples of lard analyzed had not been adulterated. Many samples sold under the name of spices did not contain even a trace of the spice named. Of 205 samples examined, 135 were adulterated, and the percentage of adulteration ranged from 61 to 100. Although the analyst describes many methods of coloring and adulterating coffee, all of the samples examined, with one exception, proved to be pure. With some difficulty he obtained four specimens of glucose, one of which contained a very large amount of free sulphuric acid and a large trace of arsenic. He declares that much of the honey of commerce consists almost entirely of glucose. Of three samples analyzed two were chiefly glucose. The sugars examined appear to have contained but little glucose, but one sample of "syrup" contained nothing else. Of 49 bottles of "olive oil," nearly all of which bore foreign labels, genuine or counterfeit, 32 contained cottonseed oil, which is now refined in great quantities in this country. The published list shows that the consumer cannot regard the price as an indication of the purity of the article. About one-third of the samples of cream of tartar were adulterated with alum, tartaric acid, terra alba, chalk, or other injurious matter.

The execution of the law has already caused a more careful selection of drugs by dealers, and the manufacture of better articles in the drug factories. Of 680 samples of drugs examined, 284 were found by the analyst to be adulterated within the meaning of the act. Thirteen per cent. of the samples of powdered opium, 82 per cent. of the samples of laudanum, 28 per cent. of the samples of the salts of cinchona alkaloids, and 85 per cent. of the samples of citrate of iron and quinine fell below the minimum standard of purity and strength. Of ten samples of creosote, so called, six were crude carbolic acid. Long lists of drugs, adulterated in various ways, are given in the report made by the analyst of drugs, together with price lists of adulterants and adulterated goods issued by manufacturing firms.

GASTON'S OPERATION.—In criticising this operation, *The New York Medical Record* says, "this suggestion of Dr. Gaston's (sic) is not, as he supposes, an entirely new one." Passing by the grammatical errors in this sentence and coming to the simple assertion contained in it, that Gaston's operation is not original (so it was declared in GAILLARD'S JOURNAL), as claimed, it is amusing to find that the *Record*, after due effort, is entirely unable to substantiate the correctness of its own assertion.

It finds that Winiwarter, two years ago, attached the cystic duct to the colon; but this fact, of course, bears no relation whatever to Gaston's operation: very little indeed more than it does to McDowell's operation.

In Gaston's operation, the bile is introduced into the duodenum, and performs its important physiological functions; while in the operation cited by the *Record*, the bile is diverted from its physiological course, and is made to intermingle in the colon with the remains of the food, from which all nutrition possible has been extracted.

Physiologically the operations bear no relation whatever to each other.

Anatomically they are still more different.

The *Record* tries to make the conditions after these operations similar by saying that Gaston has "an exaggerated notion of the importance of the gall bladder to the economy." But Gaston in attaching due importance to the bile in digestion does not, on that account, include the gall bladder in the estimate, but the bile producer, the liver.

It is a very faulty and unreliable physiologist who undertakes at this day to depreciate the importance of the bile. Surely, if one is familair with the teachings of Murchison, Bidder and Schmidt, Frerichs, Harley and others, he cannot commit such a blunder, or compare an operation in which the bile is allowed the force of its entire digestive role, with one in which it is discharged into the colon; that is, cut off from the food, and virtually discharged externally.

It is true that after the operation of cholecystotomy a number get well, and that both men and dogs live, after a fashion, after they are deprived of the digestive and nutritive forces of the bile. But that does not touch the fact that food subjected to *all* of the gastric and intestinal fluids, the bile excepted, is not digested properly; whereas, as soon as the bile is allowed to supplement these incomplete forces the digestion is normal and complete.

Gaston's operation, therefore, is original. It is physiologically and anatomically an entirely different one from that cited by the *Record*, and it is, moreover, the only operation known for occlusion of the bile duct, as a result of which digestion and nutrition are preserved normal and complete.

THE HEALTH DEPARTMENT OF THIS CITY.—Attention has repeatedly, in the last year, been drawn to the fact that this Department, once so typically efficient, commendable and scientific, is fast becoming disgraceful to the city, and to the sanitary reputation of this country. Ladies have now to form inspecting organizations, to report sanitary dangers to the Grand Jury, and then, when this Body has publicly censured the Health officers, the needed reformations are made. The following facts evince a condition of affairs which is disgraceful and without excuse; it should be presented to the Grand Jury: A complaint made to the head of the Department on January 3 was referred to the Sanitary Bureau. Not until January 7 were the premises examined, and the report of the examiner was not sent to the Sanitary Bureau until January 9. Four days later it was discovered that the complaint and report should be referred to the Board of Excise, and not until the 23d, twenty days after the nuisances were reported, did the Excise Commissioners act upon them and direct that an investigation should be made. The assistance given by the Sanitary Protective League may enable the Health Department to act more promptly with reference to complaints that demand immediate attention, and the ladies will, it is hoped, teach the Health officers their duty. These gentlemen complain of the publicity given by the Press to their inefficiency and worthlessness, and are trying to muzzle it by withholding information. Such a course can have but one result, their just extinction.

Deafness not Hereditary.—Dr. R. Mathison, Superintendent of the Ontario Institution for the Deaf and Dumb, at Belleville, in the course of a long letter to the *Toronto Mail*, says: "In Prof. Alexander Graham Bell's paper transmitted to the United States Congress upon the formation of a deaf-mute variety of the human race, he says: 'While we cannot at present arrive at any percentage, it is certain that the proportion of deaf-mute offspring born to deaf-mutes is many times greater than the proportion born to the people at large.' As far as Ontario is concerned, Mr. Bell is very much astray in his theoretical conclusions. In the Provincial Institution for the Education and Instruction of the Deaf and Dumb, at Belleville, under my charge, there are the histories of 661 mute children who are now or have been pupils since its establishment. I am acquainted with the parents of about 300 of the children, and have made inquiries during the last five years concerning many of the others. Up to this time I have been unable to find that any of the parents were or are deaf or dumb. A few of the grandparents, however, were mutes. A considerable number of deaf and dumb persons in the Province are intermarried and have children, and in every case that has come to my knowledge the children can hear and speak. There may possibly be a few instances of hereditary deafness in the Province that have not been reported, but they are so few in proportion to the number of deaf and dumb persons that an evolution of a distinct race of mutes need never be feared. Of the 661 above noted, 262 were born deaf; the others lost their hearing by fevers, measles, colds, etc."

Medical Editors.—There is an increasingly large class of these that have no direct interest in the subscription list. Doubtless this tendency will increase. Yet here, as in other journalism, it must be that those journals will exert the widest and best influence which are owned by their editors. In short, when the editor is the head of the business of a journal, as well as the head of its editorial management, then we may expect the greatest vigor of effort. When an editor makes an entire life-work of a medical journal, then will he do his very best for the journal. But so long as most editors are compelled to regard their journal work but a side issue of their regular business of practicing medicine, so long will medical journalism fail of its highest ends. As we understand, Dr. Gaillard has lived from the publication of his medical journals, excepting the emoluments from his former relations to medical colleges. We hope for him another twenty years of medical journal work, even better than the twenty years he has already completed.—*Detroit Lancet.*

FEMALE DOCTORS IN ANCIENT ATHENS.—A foreign exchange says that one of the very first of these was Agnodice, who, while yet a girl, was passionately fond of the medical art, and, with a view to practice, disguised herself in male attire, and attended the prelections of Hierophilus. When duly qualified, and still retaining man's clothing, she visited many patients, particularly females. The regular practitioners, who found themselves losing their *clientèle,* among women especially, cited her to appear before the Court of Areopagus, where she was tried, and on the point of being condemned. At this juncture her female patients came forward and gave evidence how much they, and through them the State, owed to her practice. *The Athenians thereupon changed their law, and from that time admitted free-born females to become medical practitioners.*

CHIROPODISTS AND GANGRENE.—Rev. Dr. Noah Hunt Schenck, pastor of St. Ann's on the Heights Episcopal Church, Brooklyn, died at his home from the effects of blood poisoning. About three weeks ago Dr. Schenck, who was then in robust health, had a corn removed from the second toe of his left foot by a chiropodist. Shortly afterwards he complained of the toe being painful, and the physician who was called found that gangrene had set in. His medical attendants amputated the toe, but the poison had spread through the clergyman's system, and he gradually became worse. For three days prior to his death he was in a comatose state. The deceased was fifty-nine years old, and leaves a wife and ten children.

HOW NOT TO BE KICKED.—A somewhat fussy and noisy contemporary complains of the severity of this journal's criticisms. The fact is that this journal is almost invariably too mild in its condemnations, but sometimes a little severity is needed.

In Lord Malmesbury's Memoirs it is related that a friend of Lord Alvanley came to him and complained that an acquaintance threatened to kick him when he next publicly met him, and asked his lordship what advice he would give him under the circumstances. "Why," said Lord Alvanley, "when you meet him, sit down and you will be safe. You must try and not be so big."

THE "SOUTHERN BIVOUAC."—The *Southern Bivouac* is the only Confederate soldiers' magazine published in the United States. Price $2 annually; two copies, $3; Louisville, Ky. William N. McDonald, editor, private, Stonewall Brigade; E. H. McDonald, business manager, major, 11th Va. Cavalry. Its publication was commenced by an association of ex-Confederates for the sole purpose of preserving for history the stories and incidents of the war that never appear in army reports. It was the first in this venture, but has been quickly followed, not only by the newspapers North and South, but by the leading magazines of the country.

DWARFS.—If one may believe his biographers, Jeffrey Hudson, the dwarf, was 7 years old and only 18 inches high when he first attracted the attention of George Villiers, the new Duke of Buckingham. Villiers had built for himself a magnificent mansion at Burley-on-the Hill, near Oakham, and here the famous dwarf made his first appearance before the King and Court (then on a visit to the Duke of Buckingham), served up, it is said, in a cold pie, out of whose crust he leaped in the full attire of a gallant page of honor.

PUNISHMENT FOR MALPRACTICE.—WORCESTER, Mass., Jan. 26.—The case of "Dr." Franklin Pierce, who killed one of his patients by repeated bathings in kerosene oil, which has been before the courts for nearly a year, was finally settled to-day by a sentence of two years in the House of Correction. Judge Staples, in pronouncing sentence, said Pierce not only showed ignorance, but foolhardy presumption in his treatment of the case, and that he also practised imposition upon the family in order to keep himself in their employ.

BURIAL OF LIVING VICTIMS OF CHOLERA.—A notable case occurred lately in Genoa. A Dr. Canepa suffered an attack, rapidly sank into the algid state, and was apparently dead. The supposed corpse was duly prepared for burial, but while the family were awaiting the arrival of the undertaker, six hours after he had been laid out as dead, the doctor appeared before the household reproaching them for their neglect of his wants. Restoratives were applied, but too late.

DRUGGISTS' BAR-ROOMS.—It is well known that almost every drug store in this city, and indeed in every American city, and town and village, is to a certain extent a bar-room. The Excise Commissioners are now to exact of these liquor dealers a liquor seller's license. The practice is a disgraceful one, and if pharmacists will make liquor dealers of themselves, they should pay for a liquor dealer's license.

HONEST AND DISHONEST MEDICINE.—The widow of J. C. Ayer is worth $8,000,000; Holloway, the quack, has just given away $5,000,000; Jayne, the expectorant man, is building palaces by the seaside; so is Winslow, etc. Per contra, the great men in medicine are, as a rule, very poor, but honest.

A STORY is told in the *Athenæum* of a Spaniard who, after gazing at the façade of London University, pointed to the statue of Harvey and remarked to the friend who acted as his guide: "Just like you practical English, to erect a statue to a man because he invented a sauce."

Brinton's Physicians' Daily Pocket Record.—This is one of the oldest and one of the best forms. It is equal to any published. The copy sent to this Journal is beautifully bound, and the editor expresses his high appreciation of the gift.

Vale.—Drs. Wm. Brodie, J. J. Mulheron and A. B. Lyons have, in the December issue of the *Therapeutic Gazette*, a very graceful and modest *vale* as editors of that very excellent journal. May its future editors do as much for it.

Female Inspectors, richly attired, and attended by Dr. John G. Peters (who is always doing good work) are inspecting the East River wards, to aid the worthless Board of Health.

Dr. James E. Reeves has distributed the last Report of the Health Board of West Virginia. It is a good issue, and reflects great credit on all concerned.

The *Medical Age* makes its appearance this year greatly improved. Its editor, Dr. John J. Mulheron, conducts it with great ability.

Fifth Annual Report of S. C. Board of Health is issued. It is a most useful and creditable volume, and an honor to all concerned.

The Dynamiters of London will, it is hoped, all find their way to the dissecting rooms. There will be no failures there.

Index of Last Volume not quite ready: rather than delay the issue of this number, it is held over for February Journal.

This number is made up to January 30th, 1885, and contains current news, etc., up to that date.

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Envelopes instead of Wrappers will be used hereafter in mailing this Journal; it will thus reach the subscribers without injury in the mail, and will, it is hoped, be far more welcomed. In accordance with the custom of almost all of the better periodicals, there will be stated on every envelope or wrapper the date to which the subscriber has paid. This will be done in lieu of sending receipts, and all who are deterred from sending on their subscription dues because of ignorance as to the condition of their accounts will thus be relieved of a very disagreeable suspense. Any such wrapper or envelope is a legal receipt, and subscribers will thus be saved the annoyance of keeping their receipts and of referring to them for guidance.

# GAILLARD'S MEDICAL JOURNAL

AND

(*THE AMERICAN MEDICAL WEEKLY.*)

(CONSOLIDATED.)

Scientia et Veritas Sine Timore.

VOL. XL. NEW YORK, FEBRUARY, 1885. No. 2.

## ORIGINAL ARTICLES.

### ARTICLE I.—FUNGOUS VEGETATIONS : RETROVERSION, SHORTENING OF THE VAGINA. THE RISK OF SYPHILITIC INOCULATION FROM VAGINAL DISCHARGES. OBSCURE SYMPTOMS DEPENDENT ON SYPHILIS. A Clinical Lecture delivered at the Hospital of the University of Pennsylvania. By WILLIAM GOODELL, M.D.,* Professor of Gynæcology in the University of Pennsylvania. Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN : The first patient whom I bring before you presented herself at the hospital three years ago, at which time the following notes were taken : She is thirty-five years of age, has had four children, the youngest of which is six years of age. At the last labor the placenta was retained. She suffers from metrorrhagia every two or three weeks. There is also leucorrhœa. There has always been dysmenorrhœa, with a " clotty discharge, small in quantity." As I have stated, these notes were taken three years ago. She now returns, and we shall determine her present condition. She has had no children since we last saw her. There is pain in the back and " all over." The menses come every three weeks, and are excessive in quantity. Sometimes there is frequent micturition, while at other times she is not troubled in this way. The appetite is variable, and she is unable to work as she once did.

There is one point in the history which may throw some light on the symptoms. It is stated in the notes that she had a retained placenta, but I find, on questioning her, that it was retained for only two hours, and, therefore, has no bearing on her present condition. If, however, portions of the afterbirth are retained they frequently lead to the development of fibrinous polypi or of fungous vegetations, which, giving rise to a great deal of troublesome hæmorrhage, need removal.

I wish, in the first place, to call attention to a mistake which is often made by physicians. There are certain symptoms which have been handed down from generation to generation as indicative of disease of the womb, such as irritable bladder, headache, pain in the back and bearing down sensations. Sometimes these symptoms point to such disease; more often they do not. It is a great error to put implicit reliance upon them, for they may be due to nerve-exhaustion, which counterfeits many, if not all, of the symptoms of internal disease. In this case there is, in addition to these subjective symptoms, an excessive discharge, which points strongly to some local trouble.

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* Contributed by Dr. Goodell.—ED.

It is probable that the womb will be found to be enlarged, and that the bleeding is due to the presence of either a fibroid tumor or of fungous vegetations.

You might ask why it is that I do not speak of cancer. I leave this out of the question, because I have looked over the notes taken for three years, and find no allusion to the existence of a laceration of the cervix. If I had not seen these notes I should have thought of malignant disease in explaining these symptoms, for this woman has borne children. If she had never been pregnant, I should have excluded carcinoma, because this disease, as I have often told you, is rarely found in women who have not borne children.

I shall at once proceed to the digital examination. The first thing that I discover is that the uterus is retroverted. Behind it, I find a cicatricial band, which has been caused by some difficult labor. There is also a laceration of the neck of the womb, which, although double, is worse on the right side, showing that, in all probability, it was caused by a labor with the head in the right occipito-posterior position.

I shall next pass the sound, and shall, if possible, do so without using the speculum, which displaces the womb. Occasionally you will fail to pass the sound in this way. In the present instance I find some difficulty. The sound readily enters until the internal os is reached, but there it stops. I shall try a smaller one. This at once enters the cavity of the womb, showing that there has been contraction at the internal os. The sound gives a measurement of three and a half inches. I again take the larger sound, and, by exerting a little force, I am able to push it through the constricted portion. There has been a tear of the perinæum, which, although not extensive, has been sufficient to take away the support from the anterior wall of the vagina, which is prolapsed, carrying with it the urethra.

I shall next pass the speculum and dilate the cervix, and, if possible, curette the interior of the womb. This obstruction may be due to the presence of a small fibroid. I, however, simply know that there is an obstruction, but why, I cannot say. With a little force I am able to introduce the small dilator. I find that it is impossible to dilate the internal os sufficiently to pass the curette without giving the patient excessive pain. I shall, therefore, do nothing further to-day, but will have her return in one week, when we shall give her ether, and, having dilated the cervical canal, thoroughly curette the mucous lining of the womb. I believe that a number of fungous vegetations will be found. My reason for this view is that the womb is not as large as one would expect it to be with a fibroid tumor in its walls, and, further, I know that she has a laceration of the cervix, which is a source of constant irritation. The old adage has it that "where irritation is, there is a flux of blood." So here there is a flux of blood to the womb from the irritation of the canceration, and excessive nutritive changes have taken place, leading to hypertrophy of the mucous lining of the uteus, and the formation of what are termed fungous vegetations.

Why has she backache and the other symptoms which have been enumerated? Because the womb is retroverted. When there is retroversion, there is always a certain amount of prolapse, and the fundus of the uterus presses on the bowel, causing a feeling of fullness in the rectum and a bearing down sensation. When the patient strains in emptying the bowel, the uterus is pushed down on the rectum, giving the feeling as though a foreign body were in the bowel. This is a symptom frequently complained of. It is very significant of retroversion, much more so than of retroflexion, for in the latter condition the uterus, being bent on itself, is shortened and not so likely to press on the bowel.

Patients are frequently sent to me by physicians with the statement that the uterus is retroverted and fixed. In the majority of such instances I find that, while the physician was correct in regard to the displacement, he was mistaken in regard to the fixation. The reason that he has been unable to restore the womb to its proper position has been because he has been afraid to use the requisite gentle force, or has not placed the patient in the proper position. In this condition of retroversion the uterus becomes caught between the two utero-sacral ligaments. It is, as it were, button-holed between these ligaments. It may be freed in different ways. I usually succeed with the patient on her back, the nates being drawn well over the edge of the examining table, so that the sound can be depressed sufficiently in order to raise the fundus to its proper position. I of course am not now referring to cases of recent pelvic peritonitis or cellulitis, in which there is deposit of lymph and the womb is bound down by large masses of exudation. In the present case, I think that sufficient has been done for to-day, and I shall postpone the replacement of the womb until next week.

In the meantime, I shall order for her twenty grains of bromide of potassium in a tablespoonful of compound infusion of gentian, to be taken three times a day. This will quiet the nerves and obtund their sensitiveness. This is an excellent remedy if not continued too long. If kept up for a long time in large doses it has the effect of thinning the blood and of weakening the brain. In these cases, however, it is given only for a short time, and to serve as a basis for other treatment. Knowing that it thins the blood, I combine it with a vegetable tonic. Patients suffering from nerve-exhaustion, with loss of appetite, will often improve at once under this preparation.

I shall not at present introduce a pessary. There is one difficulty here in the use of a pessary. The vagina has been shortened by the long-existing retroversion, and there is, as I have stated, a cicatricial band in the posterior cul-de-sac, which is not elastic. What is the proper way to manage such a case? One way is to introduce the largest pessary possible, and put the patient to bed. If this gives much pain, use bromides, and, if necessary, opium and belladonna suppositories. Large douches of hot water should also be administered. Under this treatment, it will often be found in a few days that the pessary has stretched the vagina and gone up much higher. I have put in pessaries that protruded from the vulva, and others which made such firm pressure on the pubic bone, that it was necessary to watch carefully the parts in order to prevent ulceration, but by pursuing this course I have in a short time been able to lengthen out the vagina sufficiently. When the patient cannot go to bed, I put in a larger pessary than I should under ordinary circumstances. If this causes pain, I have the patient use a vaginal douche at bedtime, and afterwards insert a vaginal suppository containing half a grain of morphia, with one or two grains of the extract of belladonna. In this way the vagina can usually be lengthened out sufficiently to permit the use of a pessary of a proper size.

### LACERATION OF THE CERVIX. THE DANGER OF SYPHILITIC INOCULATION FROM VAGINAL DISCHARGES.

This patient is twenty-nine years of age, and has had two children. She complains of pain in the back and of leucorrhœa. The last child was dead born, but she states that the labor was not a difficult one, lasting only twenty minutes. The movements of the child stopped two days before labor came on. Such a history should always suggest the possibility of specific poisoning. I shall question her a little further, in order to determine whether or not there is anything of that kind in this case. She states that her health has always been good; that she has never had any eruption ; that she has had sore throat for the past five years, and that she still has it. She also has pains in the fore-arms and in the shins, which she calls rheumatic. These are as severe during the day as they are at night. The first child was born five years ago. It seems to be healthy, but delicate. I examine the shins, but do not detect any nodes. I must say that under the circumstances there is no very positive evidence in favor of specific disease. The throat will have to be examined. We may, however, feel certain that there is at present no specific disease of a contagious character. Had I the slightest suspicion that there is anything of the kind, I could not be hired to put my finger in her vagina.

I find that she has retroversion and a laceration of the cervix. Next week we shall operate on the cervix, before the ward class.

The patient was removed.

Returning to the danger of inoculation from the contact of specific discharges with the fingers, let me refer to a few cases which have come under my own observation. When I was a medical student, a young man in my class had a sore on his finger which would not heal. It was examined by a number of distinguished physicians, but none of them recognized its nature. No one could explain why it lingered on so obstinately. Just about the time of graduation he broke out with the characteristic eruption of syphilis, and then the whole trouble was clear. He had been examining women in a public institution, and had been inoculated in his finger. On the ground of immorality he was refused his diploma, until he brought letters from those surgeons whom he had consulted. He at once put himself under treatment, but he lost the hair of his head and of other parts of the body. After continuing constitutional treatment for some time, he thought that the disease was eradicated, and got married. The first conception occurred and went on for two or three months, when a miscarriage took place. This was repeated for several times. He then again went under specific treatment, and placed his wife under the same treatment. At last his wife went to term, and he attended her in her labor. The child was born dead, and covered from head to foot with a loathsome eruption. Frantic from the dreadful disappointment, he at once went up stairs and shot himself dead.

Another physician of my acquaintance was inoculated in his hand while making an examination. He lost a magnificent beard, and every hair on his body, and was ill for a long time. He took every variety of medicine, but did not seem to gain relief until he went to some springs and took a course of the waters. He has since married and has had healthy children.

Another of my friends became infected while delivering the wife of a soldier, shortly after our civil war. A gummy tumor formed in the brain causing paralysis. His life was in great danger, but under treatment he improved. He then took a long voyage, but at the present time he is able only to hobble around with a cane and to see office patients. His whole future has been ruined.

Many years ago I got a sore on the index finger of the right hand, which would not heal. I showed it to several gentlemen, who assured me that it was a chancre. I went to see a well-known specialist, and he corroborated their suspicions. Then my heart sank within me, and I was for a time the most unhappy man in Philadelphia—yes, in the State: well, I will say in the whole of the United States. I was put on constitutional treatment, but this had a bad effect, producing dysentery and diarrhœa. Fortunately, the diagnosis proved an incorrect one; or, at least, little by little the sore healed. The glands did not enlarge, and there were no evidences of constitutional poisoning disease; but I had a very bad scare—a scare which has made me timid ever since. Some years after that, a physician of my acquaintance had a sore on his finger which would not heal. He went to a number of surgeons, who all failed to recognize its nature. I saw him going round with his hand in a sling, and asked him what was the matter. He told me the circumstances. I asked him if he was sure that it was not a chancre. He pooh-poohed the idea, and said that So-and-so had said it was not specific. "Well," I said, "they are specialists, and of course know better than I do, for I could not tell a chancre were I to see one; but it has a bad history, a very bad history, and I fear that they may be mistaken." Things went on, his finger healed up, but after a time his health began to fail, and he exhibited symptoms of some obscure lung trouble, which laid him up, and for which he was treated in a variety of ways, but became no better. I could stand it no longer, and went to him one day and said, "It is none of my business, but I have come to make a deliverance. I believe that you have syphilis. I believe the sore which you had on your finger was a chancre, and I believe that now you have some syphilitic trouble in the lung." Again he laughed at me, but a few days later a splendid crop of rupia broke out on his forehead. He then took constitutional remedies, and I believe he has been completely cured.

These cases are occurring constantly, and it seems when the disease is contracted in this way it is more severe than when contracted in an illegitimate way. While you should not be overparticular, still it is wise to be careful, and to reflect a moment before running unnecessary risk. Some time ago we had a narrow escape in the ward class. A woman was brought into the room covered with a sheet. We all examined her, and I examined her several times. When the examination had been completed, she called attention to a sore on her labium, which she asked me to examine. It turned out to be a chancre. There was some very thorough washing of the hands gone through with on that occasion, and the faces of some of the gentlemen present grew very pale. Soon after the opening of the Preston Retreat, a woman with a contracted pelvis was admitted, and, after a difficult forceps case, I delivered her. A number of years later she returned pregnant and in labor. She was at once admitted and put to bed, and then it was discovered that her vulva and buttocks were raw with one vast syphilitic sore. I stood aghast, for I knew that the child would have to be delivered with forceps. Could I honorably have asked any one to run a risk which it was my duty to run I would have done so, and paid him handsomely for it. I determined to put on the forceps with one hand. So, procuring a quantity of carbolized lard, I smeared my hand and arm to the elbow. I slipped on one blade of the forceps as quickly as possible, and then ran out of the room to a stationary basin and cleansed my arm and hand thoroughly. Again I smeared my arm and hand with the lard, and applied the other blade. The hand and arm were again carefully washed. Once more I annointed my hands thoroughly, then went to work with the forceps, and finally delivered the child, which died a few days later covered with bullæ. My hands were not put into the vagina to deliver the placenta, but I employed Crede's method, and with rather more vigor than on ordinary occasions. In her convalescence, the stench from this patient became so overpowering that I bribed her to go away, and sent her home in a carriage. These are risks which all must encounter, sometimes unconsciously, at other times knowingly. I have delivered many a woman suffering with this disease, but I have thus far been fortunate enough to escape infection.

### OBSCURE SYMPTOMS DUE TO SYPHILIS.

As a pendant to what I have been saying, here comes a case which was before you some weeks ago, and in which I was puzzled as to the diagnosis. She had headache, backache, and other aches, and was sent to me from the country as a case of uterine disease. I examined her before you, and, finding no disease of the womb whatever, turned her over to the medical department of the hospital. Some defect of vision being found, she was fitted with glasses, but still her headache did not improve. Finally, she fell into the hands of my friend Dr. R. G. Curtin, who discovered the true cause of her trouble, which the rest of us did not find out. He found a perforating ulcer in one of the half-arches of her throat: in other words, her aches and ill health are due to syphilis. Lately one of my private patients had retroversion of the uterus, with prolapse of the ovaries and a number of symptoms of nerve exhaustion. Under treatment, she improved; but still not so much as she ought to have done. There being some eye trouble, I sent her to a specialist to look at her eyes. He examined them, and, to my great surprise, wrote to me stating that he found certain retinal conditions suggestive of specific disease. She was at once put on constitutional treatment, and has greatly improved. The possibility of such a complication must ever be borne in mind, and in a perplexing case, where you cannot positively say whether or not syphilis exists, use specific treatment tentatively. Minute doses of bichloride of mercury or iodide of potassium can do no mischief if carefully watched.

The lesson of to-day then is:

Whenever a child is born dead, whenever this is repeated, whenever there are successive miscarriages, no matter in what walk of life the woman is, no matter whose wife she is, no matter what her pedigree is, remember the possibility of syphilis being at the bottom of the trouble. Again, if you get hold of a perplexing case, which does not improve under treatment, one in which the symptoms are obscure, and yet may possibly be attributable to a specific cause, do not allow yourself to be blinded by the glamour of the lady's social position or her environment, but treat her with appropriate remedies, and keep your own counsel: in other words, keep your eyes open and your mouth shut.

## ARTICLE II.—TWO CASES OF SUCCESSFUL LIGATION OF THE JUGULAR VEIN DURING OPERATIONS FOR THE REMOVAL OF TUMORS FROM THE NECK. By WILLIAM A. BYRD, M.D., Quincy, Illinois.

The first of these cases was that of Jeff. Krigler, a man about twenty years of age, living at Hunnewell, Missouri, where I went to remove a tumor from his neck that was situated about two inches below the angle of the jaw, and was about the size of a duck's egg, just under the inner side of and at about the middle of the sternocleido-mastoid muscle. Lying in the course of the great vessels of the neck, and also from its situation pressing upon the pneumogastric nerve, it was a source of great inconvenience; and having exhibited a tendency to rapid growth, it was deemed best by his physicians to call me and see if it could not be removed. February 3rd, 1884, I made the operation, assisted by Drs. A. L. Yancey and E. C. Davis, of Hunnewell, and J. D. Smith, of Shelbina, Missouri. After the tumor was laid bare, I found that the great vessels of the neck ran through one side of it. I proceeded with the enucleation of it as carefully as I could, but suddenly there was a great gush of blood, and seizing either side of the point of exit of the blood with a pair of artery forceps the flow was stopped, and I was enabled to see that I had torn a hole in the jugular vein, freeing the vessel on either side of enough of its sheath to enable me to easily pass an aneurism needle around it. Two pieces of fine chromatized catgut were thrown around the vessel, and it was ligated carefully on either side of the breach, in the continuity of the vessel, the vein divided between the ligatures, and the ligatures cut off close and vein dropped. The balance of the tumor was removed by enucleation with the forceps and point of a grooved director, the wound sewed up, with a drainage tube in its lower angle, and dressed with oakum smeared with vaseline to prevent the dressing adhering to the wound, and the patient turned over to Dr. Yancey for after treatment. In two or three weeks he was entirely well.

The next case was that of Peter Strunk, a German, aged 55, living in this city. He applied to me to have a tumor removed from the left side of the neck, above the middle of and under the anterior border of the sternocleido muscle. The tumor was about the size of a hen's egg, and had first been noticed about six months before as a very small lump, and had apparently remained stationary until within the last few weeks preceding the day that I first saw him. During the latter period the growth has been rapid enough to attract attention; besides, there began to be lancinating pains, becoming more frequent daily.

September 19, 1884, with the assistance of Dr. C. W. Rook and Mr. Grant Irwin, at Blessing Hospital, in this city, I operated. After getting the tumor well exposed and nearly entirely enucleated, I found that it was involved with the great vessels of the neck so intimately as to forbid its complete removal. Where the adhesions were attached to the jugular vein there was so much injury to the coats of the vessel as to render ulceration and secondary hæmorrhage almost certain. To prevent any such unfortunate accident, I ligated the vessel on either side of the diseased structure and divided the vein with the scissors. All of the tumor that was not directly and intimately attached to the carotid artery and pneumogastric nerve was then dissected out, and the wound closed with catgut sutures. The patient had a rapid recovery, with relief from all bad symptoms for about two months, when the tumor rapidly returned, and at the present time bids fair to end his life in a very few days. It is hardly necessary to defend the ligation of large venous trunks for injury to their coats. There could be no other course pursued with safety where the injury is in the continuity of the vessel. Lateral ligation has proved a delusion and a snare, while suturing is no less unsafe. Torsion might be resorted to, and I have used that method with great satisfaction of closing large veins in amputations, but certainly much prefer ligation with either a carbolized catgut or a small unwaxed silk thread, with division of the vessel between the ligatures, when the vein requires to be closed in its continuity. The division of the vessel between the ligatures should never be neglected, as that permits the vessel to retract, and is followed by more speedy healing of the vessel, with a minimum liability to ulceration, followed by secondary hæmorrhage. I refer to the silk thread as necessary to be applied unwaxed, because if it is not waxed it will cause as little, if not less, irritation as the carbolized catgut, and be absorbed almost as soon. These cases are put on record not so much as a warning to operators of the danger to the jugular vein in operations upon tumors situated near the large vessels of the neck, but to show the comparative safety of tying the vessel when it is torn in two or otherwise injured.

## ARTICLE III.—A CASE OF STRICTURE; RUPTURE OF URETHRA; EXTRAVASION OF URINE; EXTENSIVE SLOUGHINGS; LOSS OF TWO INCHES OF URETHRA, WITH COMPLETE RECOVERY. By A. B. COOK, A.M., M.D., formerly Professor of the Surgical Diseases of the Genito-Urinary Organs and Rectum, University of Louisville; late Professor of Surgery, Kentucky School of Medicine, Louisville, Ky.

During my term of service as visiting surgeon to the Louisville City Hospital, there was admitted to the surgical ward, April 27, 1878, G. W., age 44 years; occupation, street contractor; of intemperate habits. Previous history: In 1869 he contracted gonorrhœa, which was followed by a stricture about one inch from the meatus, and a second one in the membranous portion of the urethra. In 1873 the strictures were treated in Washington City. In 1875 the patient, on his own responsibility, again relieved himself temporarily by the introduction of catheters. A few months previous to admission to the hospital he contracted a new case of gonorrhœa, which was progressing favorably, when a debauch, followed by exposure, neglect and urinary retention, caused rupture of the urethra behind the deep-seated stricture. "The patient stated that when he had partially been restored to consciousness he saw some enlargement of the scrotum, and introduced a small catheter, through which flowed a little urine (undoubtedly from the infiltrated tissues, as the bladder was not relieved and the swelling rapidly increased afterwards), but he did not know at what time the rupture occurred. When admitted, he was much prostrated. The extravasation involved the perinæum, the abdominal walls to the umbilicus; swelling, tenderness and pain, greater in the left hypogastric region, the scrotum and penis. The scrotum was greatly distended, as large as the head of a new-born infant, with marked discoloration, and the right side of the scrotum and penis in incipient grangrene. On the evening of admission, temporary relief was given by puncturing the scrotum with a bistoury, after which the bladder was aspirated. But little urine was found, the viscus having emptied its contents into the tissues. On arriving, I succeeded in introducing into the bladder a No. 1 English gum catheter, and made several small incisions into the scrotum and penis; gave a hypodermic injection, Magendie's solution m. 15, and ordered locally lint saturated with carbolized oil, strength 10 grs. to ℥ i of oil, and cloths wrung out in hot water to be constantly applied.

Next morning, April 27, I used Holt's dilator and introduced a No. 11 English gum catheter, which was permanently retained, and made a perinæal section down to the ruptured urethra, introduced a probe-pointed bistoury, and divided the urethra to the extent of the stricture, with the hope to avert sloughing; made free incisions on each side of raphe into perinæum, scrotum and right side of the body of the penis. I dressed the exposed tissues by introducing into the incisions pieces of lint saturated with the following solution: Chloral hydrate, ʒ j.; aqua dest., ℥ iv.; glycerine, ℥ ij.; over all, lint saturated with carbolized oil, hot fomentations and oil-silk. Ordered internally five-grain capsules of sulph. cinchonidia every three hours. Temperature, 99½ A.M., 100 P.M. Temperature taken morning and night.

April 28.—Resting easy; but little pain; abdominal swelling subsiding; sloughing commenced in the parts incised; local treatment continued; internally, five-grain sulph. cinchonidia capsules every six hours, and the following: ℞. Tr. ferri mur., ℥ i.; syrup simplex, ℥ ij. M. S. A teaspoonful every six hours in a gill of water. Temperature, 100 A.M., 101 P.M.

April 29.—Doing well; has very little pain; kidneys acting freely; sloughing progressing: appetite moderate; bowels moved with castor oil. Temperature, 100 A.M., 102 P.M. Treatment continued.

April 30.—Patient feels better; appetite good, relishes food; swelling in left hypogastric region at a standstill. Apprehending the formation of an abscess, I introduced a hypodermic syringe, but found no pus; removed the dead tissues with scissors; sloughs looking well; removed the catheter and introduced a new one. Temperature to-day, 100½. Treatment continued.

May 1.—I again clipped off sloughing tissues; made an incision into the perinæum to give free exit to and prevent bagging of pus; made two incisions in the left hypogastric region, the lower one nearer the pelvis, and introduced a tent to act as drainage tube—the two incisions communicating; a little pus escaped. The relief of tension added to the patient's comfort. Temperature, 99 A.M., 99½ P.M. Treatment continued.

May 3.—Patient's general condition better; appetite good. After removing more sloughs some healthy tissue was brought to view; free discharge of pus from the scrotum; made another incision well to the left side of the hypogastrium and removed large sloughs of abdominal fascia through the incisions. The deep-seated sloughing tissues were cleansed by daily injections of carbolized water of sufficient strength to be felt without causing actual pain. The removal of the sloughs and cleansing gave great relief to the patient. Temperature, 99½ A.M., 100½ P.M.

May 4.—Removed the catheter and introduced a new No. 11; free discharge of pus from the scrotum and abdominal incisions. Temperature, 98½ A.M., 100 P.M.

May 6.—Finding the right side of the scrotum had almost sloughed off the tissue, it was detached, leaving the testicle exposed; most of the sloughs having been removed, healthy granulations were now beginning to spring up in the perinæum and what was left of the scrotum, indicating a general systematic improvement. I introduced a flexible bougie through the abdominal incisions, and passed it without obstruction down into the scrotum. The carbolized injections passed freely from the abdomen through the scrotum. I made another incision in the right hypogastric region above the pubis to secure efficient drainage. General and local treatment continued. Temperature 100¾ A.M., 102¾ P.M.

May 7.—Removed, through the perinæal incisions, dead cellular tissue, which extended up into the left inguinal region, thus establishing free communication between this and the abdominal incisions. Average temperature, 100.

May 8.—From the time sloughing commenced the dressings had to be changed frequently, the large extent of surface exposed requiring the use of much lint, the fibres of which adhered to, and broke up to some extent, the new granulations. I substituted the paper fibre lint, which had been ordered as a special dressing for this case. This lint makes an elegant dressing; it is soft, the surface is smooth, very cleanly, does not impair the growth of granulations, and is readily removed. The patient expressed great gratification with the change. Dr. Bates, the efficient resident graduate, made the following note: "Will also state that Dr. A. B. Cook, visiting surgeon, was the first one to introduce its use in this hospital, showing a mark of economy, as well as an improvement, in the use of lint as a dressing." Temperature, 98½ A.M., 100¾ P.M.

May 9.—Less discharge of pus; exposed surfaces granulating rapidly; detached another slough from the scrotum, and introduced a new catheter. I observed that full two inches, by measurement, of the urethra had sloughed, exposing the catheter. The note-book states: "Paper fibre lint is giving satisfaction; is removed with ease, and leaves the surfaces perfectly clean." Temperature, 99 A.M., 102¾ P.M.; appetite good, bowels regular.

May 10.—Temperature, 99¾ A.M., 101½ P.M.

May 11.—Temperature, 99½ A.M., 103 P.M.; appetite and general condition good.

May 12.—Temperature, 100¾ A.M., 101½ P.M.

May 13.—Temperature, 99½ A.M., 100½ P.M.

May 14 and 15.—Temperature, 98½ A.M. and P.M.

May 16.—Temperature normal; wounds healthy, contracting and healing rapidly; all the abdominal wounds, save one, have healed; introduced a new catheter, No. 12.

May 19.—Temperature normal; testicle almost covered with new tissue; healthy granulations in abundance are being thrown out over the two inches of lost urethra, to form a new urethra around the permanently-retained catheter, but little surface of which is now to be seen. I have never witnessed so rapid a restoration of lost tissues. General and local treatment continued.

May 30.—Since last report, case has been progressing well, without anything of special interest to note. One incision in abdomen still open, but no discharge of pus; the perinæum is filled out with healthy tissue and almost closed; the testicle, excepting one small point, covered; and only one small opening in the new urethra; the granulations look "beautiful," and the improvement, compared with two weeks ago, is remarkable. A No. 11 catheter was last introduced, no No. 12 being at hand. On passing urine, a few drops escaped through the small aperture in the new urethra; patient now retains urine much longer than during the first few days, the catheter being uncorked when he wishes to void urine.

The patient is now cheerful, in fine spirits, and doing well under the same general treatment. During the sloughing process he took one-fourth grain doses of sulph. morphia at night to procure sleep, and occasionally through the day when restless. On two occasions a diarrhœa was easily controlled by twenty-five drop doses of laudanum. Diet at first: extract of beef, milk, milk-punch, eggs, and solid food as soon as he could digest with comfort.

June 11.—The catheter was removed; the patient, being in good health, required no further treatment. He visited my office a few times to have a sound introduced to prevent contraction of the new urethral tissue.

Since September, 1878, the patient has enjoyed good health, has been regular in his habits, and states that at no time has there been any diminution in the size or volume of the stream, and no symptoms of contraction in the urethral channel.

In the foregoing brief résumé of this case the following points of interest may be noted:

1. The great extent of the urinary infiltration.
2. The large surfaces and plains of fascia involved in and detached by sloughing.
3. The retention permanently, for more than six weeks, of a catheter in the bladder.

4. The formation by granulation of two inches of urethra around the body of the catheter.
5. The permanent patency, this time, of the urethral channel.
6. The value of assiduous attention to detail in local dressings.

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## RÉSUMÉ OF ORIGINAL ARTICLES

### IN OTHER JOURNALS.

The Chemical Poisons Formed within the Intestinal Canal.—Dr. Netler states in the *Archives Génerales de Médicine*, October, 1884, that the presence of inferior organisms produces, in the course of decomposition of nitrogenous matters, toxic substances of greater or less activity. These putrid poisons, or ptomaines, exist not only in putrefaction occurring without the body, but are present also normally in the digestive canal, and even in the blood. They play a very important part in pathology, and to them may be attributed: 1, poisoning by putrefactive matters, in which the poison, formed without the body, enters the organism by way of the intestinal canal or a wound; 2, putrid auto-intoxication, due to the action of ptomaines formed with the digestive tube; 3, the rôle of these ptomaines is very important, though at first sight less evident, in uræmia and acholia due to changes in the kidneys or liver. In these cases the alkaloids, not being excreted by the diseased organs, accumulate in the blood, and give rise to symptoms of poisoning.

Formic Acid as a Germicide.—The conditions of animal life vary immensely; the introduction of a single influence, not apparently of a powerful nature, may determine the death of some organisms. M. Schnetzler, a few weeks ago, communicated in the *Lancet* some observations to the Académie des Sciences which serve to illustrate the above general principle. He has found that *Bacterium subtile*, one of the most difficult micro-parasites to kill, dies when in the presence of formic acid. Even when this bacterium has resisted the action of boiling water for one hour, it may be instantaneously killed by formic acid; a drop of water containing a thousandth part of formic acid to a drop of water teeming with thousands of the bacteria is sufficient to effect the purpose. The swarming fluid so treated may be introduced into the digestive tract with impunity. The author recommends the trial of formic acid on the cholera bacillus, and it may be suggested that its action on *Bacillus anthracis* is equally deserving of experiment. If formic acid should be found to be capable of destroying the dried virus of charbon, provided this chemical agent does not injure imported wool—and in such a diluted state injury seems impossible—the suggestion that all imported wool be washed in a weak solution of formic acid might be of value in preventing the occurrence of so fatal a disease as malignant pustule and its allies.

Conception During Amenorrhœa.—On the subject of conception during amenorrhœa, André Petit (*Annales de Gynécol.*) writes : After a historical retrospect and a discussion of the ovular theory of menstruation, the conclusion is drawn that amenorrhœa is most frequently symptomatic of absence of ovarian function, and, in consequence, is accompanied by sterility. Seeing, however, that impregnation not uncommonly occurs without that sanguineous flow which is the accompaniment of ovulation, this conclusion must be so far modified as to include cases where ovulation takes place without any coincident red uterine discharge, or true menses. What is the most rational explanation of this curious anomaly in the functions of reproduction? Ordinarily, in the adult female normally constituted, from puberty to the menopause, when the Graafian follicle ripens, the ovarian excitement spreads to the genital organism in general, and congestion of this organism ensues, accompanied by sensations known as the molimina. When this congestion reaches its height, there occur in the uterus vascular ruptures and epithelial desquamation, followed by more or less hæmorrhage, which constitutes the menstrual flow. Now, owing to uterine or general conditions, this hæmorrhage may not occur, but instead a white discharge, coming, probably, from the uterine glands. Such a discharge will usually be found in amenorrhoic women who are capable of conception. It lasts from four to six days, with the ordinary menstrul molimina. It is not invariably white, but may be reddish in varying degrees, only stopping short, as it were, of the habitual menstrual color. In addition, there are cases where there is no discharge at all. The following abstract of a case from the practice of Dr. Burdel is an instance of the kind. He was called in haste to see a nullipara, æt. twenty-one, and found the infant lying between her legs attached to the inverted uterus through an adherent placenta. This was removed, the uterus reduced, and all hæmorrhage stopped. A few days after, the patient was attacked by an acute puerperal metro-peritonitis. Her convalescence was tedious, owing to an accompanying intermittent fever, phlebitis, angioleucitis. At the end of eighteen months, she was restored to normal health. The menses never reappeared, however, and yet at the end of two and one-half years she was delivered at term, and still a third time in sixteen months, to be followed by a fourth child at the end of six years. In this woman's case, no leucorrhea was ever noted. M. Gallard, to whom the case was related, explained the anomaly on the supposition that the uterine mucous membrane was so profoundly affected at the time of the first labor that it was never able thereafter to respond to the ovarian stimulus, and that the absence of any white discharge was due to the fact that the uterine glands had been destroyed. Still another cause of the absence of the normal menstrual flow is the presence of a profound anæmia. That women so affected still ovulate is sufficiently proven by a case related by Dr. Sinety concerning a young woman who died of phthisis, and at whose autopsy a recent corpus luteum was found, though she had not menstruated for many months. A similar case has been published by Dr. Vermeil. These women, besides, retain their sexual appetite. (This is hardly a proof of the continuance of ovulation, for women whose tubes and ovaries have been removed do not in consequence lose their sexual appetite.) P. himself relates some striking cases where menstruation accompanied ovulation. As for the amenorrhœa of lactation, it is physiological, and the same is true of the amenorrhœa of pregnancy. Most authors agree that during pregnancy the ovaries cease to functionate. And yet there are cases on record where menstruation has continued during pregnancy, and others where the menstrual flow has first appeared during the gravid state. It is an open question as to whether in such cases the flow is really menstrual in the sense of coming from the uterus.

ACTION OF DIGITALIS ON THE CIRCULATION.—Dr. James Stewart (*Can. Med. and Surg. Journal*) says: The effect of small medicinal doses (10 minims of the tincture every twelve hours) of digitalis is to make the heart beat with an increased vigor. The left ventricle especially beats more powerfully. Coupled with this increased vigor of the heart's contractions there is a slight rise in the blood pressure, which has the direct effect of sending more blood to the ventricles and the indirect effect of further stimulating them in their contractions. If larger medicinal doses are administered, we have, in addition to an increase in the effects already described, a slowing of the heart. The ventricles now beat not only more vigorously, but also slower. This slowing from full medicinal doses may amount to forty or even fifty beats per minute, but it is only in cases of cardiac failure that such a marked reduction takes place, and then only when the patient is confined to bed. Slight exercise readily quickens the pulse reduced by digitalis. That digitalis can slow the movements of a healthy heart to a considerable extent there is no doubt, but just to what extent it can do this, short of too high doses, I am not able to tell you. Some people's pulses are much easier reduced than those of others. The pulse of the feeble is much more easily reduced than the pulse of the robust. It has very little power in reducing the pulse of fever. If the temperature is high it practically may be said to have no influence at all. If the dose of digitalis be still increased, the vigor of the contractions becomes still greater, and the slowing more decided, until finally the ventricles come to a stand still in contraction. Dr. Stewart then summarizes the action of digitalis on the circulation in full medicinal doses as follows: 1. It makes the ventricles beat more powerfully. 2. It makes them beat slower. 3. It contracts the arterioles. 4. It raises the blood pressure. These effects take place even after the vagi are divided and the spinal cord destroyed. It therefore follows that they are due (necessarily for the most part) to a direct action on the structure of the heart itself and on the vessels. This is further confirmed by the fact that when digitalis is directly applied to the isolated frog's heart it slows and renders its movements more powerful. The increased vigor of the contraction is due to a stimulation of the intra-cardiac motor ganglia, while the slowing is principally brought about by stimulation of the peripheral terminations of the vagus in the heart. Digitalis also has a stimulating action on the vagus centre in the medulla.

TREATMENT OF AMENORRHŒA BY PERMANGANATE OF POTASH.—Drs. Ringer and Munell (*Journal of the American Medical Association*) have used the permanganate of potash in 69 cases of amenorrhœa in solution or in pills, beginning with a dose of 6 centigrammes three times a day and increasing it progressively to 12 centigrammes. This treatment has given excellent results in young girls, 18 to 25, who were affected with amenorrhœa from taking cold. The treatment should be commenced several days before the time for the appearance of the menses. The results of this treatment have been no less satisfactory in women from 35 to 40 years, in whom the amenorrhœa was symptomatic of repeated confinements and prolonged lactation. On the other hand, if the amenorrhœa is in consequence of normal pregnancy, the treatment is perfectly inoffensive. It remains inert if the amenorrhœa occurs in the last stages of phthisis. In the first stages of phthisis, the permanganate may cause the menses to reappear, but it has no influence on the progress of the disease. Finally, in young girls, where the establishment of the menstrual period is retarded, it has but little effect. The use of the permanganate in solution is sometimes followed by nausea, vomiting and acute pain under the sternum. This drug does not seem to act by modifying the composition of the blood, for it acts equally well with the plethoric and the chloro-anæmic.

RUSSIAN BATHS.—In order to determine the influence of daily Russian steam baths on the healthy system, Dr. V. V. Godlevsky (*St. Petersburg Inaugural Dissertation*) made a series of careful observations on two quite sound and strong men, who, for the first ten days, daily took a simple vapor-bath, and then, after an interval of another ten days, daily took a vapor-bath, with rubbing and beating the skin by a *venik* (a bundle of birch twigs with leaves). The effects, as enumerated by the author, were as follows: 1. The pulse and respiration considerably increased in frequency. 2. The circumference and expansion of the chest became somewhat larger. 3. The energy of expiration and inspiration decreased. 4. The capacity of the lungs decreased. 5. The axillary and rectal temperature rose. 6. The weight of the body fell considerably. 7. The volume of the limbs increased. 8. The circumference of the belly decreased. 9. The muscular strength of the hands lessened slightly, and that of the feet and abdomen considerably. 10. The daily amount of urine decreased, but its density increased. 11. The excretion of nitrogen was considerably increased, the increase lasting for five days after completing a series of baths. 12. The excretion of phosphoric and sulphuric acids also increased, but less considerably. The action of baths with the application of *venik* is more powerful than that of simple vapor-baths.

CAUSE OF THE PECULIAR FORM OF THE FEMALE PELVIS.—Veit (*Zeit. f. Geb. u. Gyn.*, Band IX., Heft 2) says: "In addition to scientific investigation, such a subject must involve historical and speculative details. Litzmann enumerates as the factors in producing the form of the pelvis: 1. The original position, development and growth of the elements of the pelvis. 2. The weight of the superimposed body. 3. The resistance of the bones and cartilages of the pelvis. 4. The traction and pressure of the attached muscles. Fehling, in his work upon this subject, concludes: 1. That the original direction of the fœtal pelvis is transverse, and that this position is assumed very early in fœtal life. 2. That differences in sex are early indicated by differences in the form of the pelvis. 3. That the pelvis demonstrates a bending in the long diameter of the sacrum. 4. That the analogy of the transverse trend, etc., with similar peculiarities in rachitic pelves in adults, goes to prove that there is in such cases only a permanency of fœtal conditions. With these conclusions the author takes issue, stating, and giving reasons therefor, that the fœtal rachitic pelvis is of no value in its bearing upon subsequent shapes of that structure, and that neither the conclusion as to permanency of form nor that as to the action of muscular force in this direction is authorized. The study of the pelvis of new-born infants is valuable, however, in connection with the subject in hand. The following fact is emphasized, viz.: that the *promontory*, which at first lies *beyond* the superior strait, at a later period lies within the plane of the same, and this being the case, the original form of the pelvis cannot be permanent. In addition to the conclusions already mentioned, the author finds that the normal pelvis of the adult differs in its conformation from the normal pelvis of the new-born, the factors which produce the change being extra-uterine; the pathological formations of the pelvis occur in the new-born in connection with general and local deformities, and that these last-mentioned conditions stand in no genetic relation with the similar conditions in the adult. For certain varieties of faulty pelves, Litzmann's theory of the effect of the pressure of the superimposed body offers a sufficient explanation, but the other elements in his theory (muscular traction, etc.) do not as yet rest upon sufficient grounds of proof."

PHYSIOLOGICAL ACTION OF COCAINE ON THE COMMON FROG.—Dr. Hermann Biggs sums up the action of cocaine on the frog, as follows: 1. It has a powerful anæsthetic action on the skin, mucous membrane and the eye. It usually produces mydriasis. 2. It has a depressant action on the heart, reduces the force and frequency of its pulsations, and finally paralyzes it (first the ventricle and then the auricles) in diastole. 3. In small doses it at first slightly increases the number of the respirations, then decreases them, and in large doses diminishes them rapidly from the first, finally causing death from a paralysis of respiration. 4. It at first slightly heightens, and then greatly depresses the reflex action of the spinal cord in small doses. Large doses depress from the first. 5. Small doses at first slightly increase the irritability of the sensory nerves, then depress their irritability, and large doses depress from the first. 6. Both large and small (not very small) doses have a depressant action on the motor nerves. 7. It paralyzes the pneumogastric nerves. 8. Doses of moderate size diminish the excitability of the striated muscles. 9. The local application of cocaine to any of the more highly-constituted organs or tissues causes a temporary cessation of their functional activity. 10. From the local and constitutional action on the different organs and tissues it is rendered probable that its general action is wholly a local one, exercised on all parts for which it has a chemical affinity through its presence in the blood.

Changes in the Teeth Caused by Syphilis.—Fournier notes that in regard to the formation of the teeth (*La Sem. Méd.*) syphilis causes: 1. A delay in their appearance. Demarquay relates the case of a child of syphilitic parents who had no teeth when four and a half years old. 2. Changes in the structure of the teeth, as follows: (*a*) Erosions, of which the most important is the nail-mark as first described by Hutchinson. This erosion is crescentic, and occurs especially on the edge of the upper middle incisors. Then come the furrows, the steps, the honeycomb and the serrate erosions. (*b*) Microdontismus or dwarfed formation of the teeth. (*c*) Amorphismus, in which the teeth of each single group lose their characteristic marks. (*d*) The easy destructibility, rapid using up, and early falling out of the teeth.

Artificial Anus Cured by Enterotomy.—Dr. Cannizzaro, in the *Rivista Internazionale di Medicina e Chirurgia*, recently reported the case of S. P., aged sixty-seven, who for some years had had a reducible right inguinal hernia. Symptoms of strangulation supervened, and a surgeon, after ineffectually applying the taxis, advised operation. The patient objecting, the hernial coverings sloughed, and an artificial anus was established in the right groin. When Dr. Cannizzaro operated, on the 1st of last October, he found the septum or spur (*lo sperone*) very well marked. Having grasped it in its whole depth within the blades of the enterotome, he tightened the screw until the patient complained of pain in the part and at the epigastrium. The instrument was immobilised with a spica bandage and compress. During the first day the patient was much depressed, and inclined to vomit. The dressing, changed each day, contained fecal matter; each day also the screw was tightened until the patient complained of pain. Chicken broth, eggs, and wine were taken freely. During the fifth night the bowels acted abundantly twice and naturally. On the sixth and seventh days very little fecal matter was found around the dressing, and on the eighth day the enterotome was observed to be very movable. It could not then be detached, but it came away with the dressing on the ninth day after operation. The wound was then washed with carbolised water, its surroundings brushed with collodion, and a compressing bandage applied. From this date the patient continued to evacuate per anum; in reapplying the bandage daily, care was taken to approximate the edges of the wound, which gradually healed; the patient leaving the hospital cured, in excellent health, on the 15th of November, just forty-five days after the operation.

# ORIGINAL TRANSLATIONS.

## Tardy Hereditary Syphilis. Clinique of the Hospital Saint Louis. Dr. A. Fournier. Translated from the *Union Médicale*, Nos. 133, 135 and 136. By H. McS. Gamble, M.D., Moorefield, W. Va.

Gentlemen: I propose to discuss before you, in a series of conferences, the grave and important question of tardy hereditary syphilis.

Tardy hereditary syphilis, I have said. Let us determine at the outset what is understood and what we propose to study under this term.

Under this term (which may, I confess, expose a side to criticism, but which we preserve because it is short and convenient) we designate the *ensemble* of syphilitic symptoms which, arising from an hereditary infection, manifest themselves at a more or less advanced time of life, that is to say, in the course of the second period of infancy, of adolescence and of adult age. In contrast with precocious hereditary syphilis, which immediately or rapidly follows birth, tardy hereditary syphilis is that which enters upon action at an age more remote from birth, and that whether it shows its first manifestations at this age, or has been preceded by manifestations contemporary with the youngest life.

I insist upon and am precise as to these facts in order not to leave a place in your minds for any doubt, for any ambiguity. Here is, I suppose, a child who, although the issue of syphilitic parents, has reached the age of twelve years without presenting anything whatever of a suspicious character. At this moment he is affected with a gumma or an exostosis, or with some other lesion of a nature incontestably specific. This is, *par excellence*, for us as for everybody, a case of tardy hereditary syphilis.

On the other hand, here is another child who, equally the issue of syphilitic parents, has been affected in the early months of life with divers manifestations of a specific order. He has been treated at this time, or he has not been treated, it matters little; in point of fact, he has been cured. Then, ten, twelve, fifteen, twenty years later, and without subsequent contamination, he presents anew this or that manifestation of syphilis. This will be again, for us, a case of tardy hereditary syphilis.

In a word, and in the most general manner, every specific manifestation of hereditary origin arising at an age more advanced than that at which the hereditary accidents of syphilis are usually observed, that is to say, beyond the first two or three years of life, will come under the head of what we conventionally call tardy hereditary syphilis.

My aim, my ambition, gentlemen, is to establish, in the course of the conferences which we commence to-day, the following several propositions, which, for me, attain to the rank of demonstrated clinical facts, to-wit:

That the hereditary influence of syphilis is not confined—contrary to a prejudice which is only too popular—to determining a group of manifestations limited to the earliest life; that, on the contrary, it continues far beyond; that it pursues its victims further on in life.

That, moreover, it strikes its first blows sometimes, upon subjects primarily spared, only at a stage more or less remote from early infancy.

That thus, in one way or another, (that is to say, whether consecutively to symptoms in early life, or all at once), it frequently, far more frequently than is generally believed, leads us to realize specific lesions in the course of the second period of infancy, of adolescence, of youth—even of adult age.

And finally, that these said lesions, almost always misunderstood as to their origin, almost always referred erroneously to scrofula, ought to be attributed to syphilis, of which they constitute in reality the hereditary manifestations falling due more or less tardily.

Hereditary syphilis is represented as exclusively belonging to early infancy. This is a great error, or, more correctly, this is an opinion composed of two great errors: the one according to which a child who has been affected with specific symptoms in early life, but who has been cured of them by a specific treatment, would have nothing more to fear ulteriorly, from syphilis would have finished forever with syphilis; the other, more prevalent still and better accredited, which consists in believing that a child the issue of syphilitic parents has surely escaped the specific heredity if he has presented nothing suspicious in the first months or the first years of his life.

You will see by what follows, gentlemen, whether this double error is con demned by clinical observations.

Such is, in a few words, the vast programme which I have imposed upon myself the task of developing before you this year.

But, either I am very much deceived, or this is for every physician a subject of study of the very highest importance, and important from the double point of view of science and practice.

Scientifically, we are here most evidently in face of a major subject. Is it not in fact the role of the pathologist to strive to erect each morbid type according to the clinical fact, that is to say, to assign to each disease the manifestations which belong to its domain, as well as to cut off those which are foreign to it.

And, on the other hand, far more important still, from a practical and professional point of view, is presented the study which we are going to undertake. For to affirm the existence of a tardy hereditary syphilis, and to demonstrate that to this syphilis ought to be attributed a number of symptoms and of lesions which are erroneously separated from it, is at one blow, *ipso facto*, to mark out the treatment applicable to these symptoms and to these lesions; it is to open a new thereapeutic road against this order of manifestations; it is to offer the resource of a powerful medication for these accidents which this medication alone is capable of curing, and which without it would only too often terminate in the most disastrous consequences, even in death.

Of all that, gentlemen, you shall soon judge for yourselves, when I shall have shown you how multiple, diverse and grave, at the same time, are the morbid determinations which the hereditary syphilitic influence may develop at more or less advanced periods of life. For the present, trust me for the demonstration which will come at its proper time, and which, I promise, shall be of a nature to satisfy you.

One word more before entering upon the subject.

This question of tardy hereditary syphilis, gentlemen, I have so much the more at heart to approach and to discuss thoroughly before you as it is cast off, neglected, shall I say almost disdained, by the greater portion of contemporary pathologists. Open a book on internal or external pathology, you will find therein scarcely any mention of the symptoms which syphilitic heredity may realize at a late date, and I could even cite more than one classical treatise in which there is not the slightest allusion made to them. Open, on the other hand, a book on special pathology, you will certainly find therein the question indicated, but indicated how—in what manner? In the most sober, the most discreet manner; so that, restricted to a short chapter, in which figure a few equivocal observations, without extended commentaries, it is therein eluded, avoided, rather than truly studied, examined, discussed and judged. So, what has resulted from this silence of the classics upon the subject which engages us? It is that the generation of the physicians of our day has remained indifferent—I dare not say a stranger—to this interesting problem. In the medical public at present there is a profound scepticism relative to tardy hereditary syphilis. To speak plainly, it is not believed in, or it is believed in but slightly. This I affirm from a thorough knowledge of the matter and from personal experience. Several times, for example, it has happened to me, apropos of cases of this kind, to express before my confrères the diagnosis of tardy hereditary syphilis, undertaking to justify this diagnosis by reasons which I believed then, as I believe them still, most legitimate, and, save a few rare exceptions, I have seldom seen my opinion received with anything but significant astonishment, as if I had emitted some paradox, some curious, extraordinary proposition. On the other hand, I have often conversed upon the subject in question among confrères, among friends, and from these familiar conversations, sometimes so instructive, where each one tells, without hindrance, what he has seen, what he believes to be true or false in such or such a doctrine. I have received this formal impression, to wit: that tardy hereditary syphilis enjoyed as yet among us but a most restricted credit, and that it counted still but very few believers. Briefly, if I had to describe to you the actual state of mind relative to our subject, I should think that I was appreciating it in a manner strictly conformable to the truth in saying to you as follows :

Among our confrères there is a certain number who would willingly admit a tardy hereditary syphilis ; "for," say they, "there is nothing more logical in principle ; why should not hereditary syphilis do what acquired syphilis does ?" But they would like to have "proofs in order to believe in it, and good proofs, and in sufficient number." Nothing more legitimate.

Others—and these comprise, I say it with regret, an imposing majority—contest the authenticity of a tardy hereditary syphilis, which they qualify as "a theoretical, illusory conception." They hold it not demonstrated by the observations produced up to this time, and oppose all sorts of conclusions in order to reject it ; all the objections drawn from the sources of error which may give rise to a change in its aspect and transform apparently an acquired syphilis into a hereditary syphilis. They invoke against it, for example, the accidental or criminal contagions to which the child is exposed, "the depravity of debauchery, ill usage, the falsehoods of those interested ;" in a word, all the uncertainties—and they are numerous—which may hang over the origin of the contamination.

Some yet, from preconceived opinion, reject tardy hereditary syphilis, crying out against what they call "the tendencies of syphilis to incessantly extend its domain." "They are never done," say they, "with the pox. Here it is now, under the name of tardy hereditary syphilis, claiming to substitute itself for the scrofula, and demanding for itself different symptoms, which scrofula produces in infancy and in youth."

A few others even—and I am forgetting them—vigorously attack by irony the doctrine which we are going to defend : "an agreeable doctrine," say they ; "a convenient scapegoat for the use of unscrupulous sons, who find it good to show themselves innocent of their own faults at the expense of their fathers, etc." "Moreover," they add, "Voltaire has decided the question of old, in relating to us the history of that honest husband who was at first very much astonished at contracting the pox from his lawful wife the first night of his marriage, but who was not slow to accept the thing as very natural as soon as his worthy half had explained to him that the pox was in her family—hers, an hereditary patrimony."

Ah ! well, no matter, gentlemen ; in spite of Voltaire, who would, moreover, be very much astonished at figuring in a scientific question of this kind—in spite of the sneerers, of the sceptics, of the indifferent, we believe ourselves in the reality, in the authenticity of a tardy hereditary syphilis, and we believe in it because we are led and authorized by clinical experience to believe in it.

We are told that the hereditary influence of syphilis, when it is to develop in a subject, develops immediately in him in the first weeks of life, at least in the first months ; we are told that this influence concentres and restricts its action in an almost exclusive manner upon the earliest age, without prolonging itself until subsequent ages ; we are told that scrofula is a disease known, determined, which could never be confounded with the symptoms of hereditary syphilis ; we are told that the fashion tends to the encroachments of syphilis, and that it is time to strike back against this abuse, etc., etc. To all this we answer, we, in the name of the clinique: That, if hereditary syphilis often reveals itself at birth, or at a short time after birth, there are cases not less authentic in which it remains a long time silent and latent, in which it suppressed its manifestations in early infancy only to explode at a period more remote.

That, manifest or latent in the earliest age, it extends far beyond its specific influence, and that it is capable of doing what acquired syphilis does, that is to say, of betraying itself by divers manifestations at long range, or, to speak in more precise terms, of developing specific symptoms in the course not only of the second period of infancy, but of adolescence, of youth, even of mature age; that these late determinations of hereditary syphilis are liable, for numerous and divers reasons, to be misinterpreted as to their nature, notably to be considered as scrofulous; that errors of this kind have often been committed and are still committed daily. I will cite you numerous examples to show, as we go along, that finally there is no cause to complain of the pretended "encroachments" (nosological encroachments, be it understood) of syphilis, if so be that they are justified by the clinique. Very far from that! These encroachments, on the contrary, must be considered as advancements, as benefits, since they open to therapeutics new resources, since they lead to curing that which before them was not cured.

But enough of preambles and generalities, let us come to the facts.

Before entering upon the details and special descriptions, it seems to me opportune to produce at once some of the cases which are going to impose themselves upon us for examination. The exposition of these clinical observations will have the double advantage, at the outset of this study, of defining well the subject which we are going to treat, and of establishing its authenticity.

Then, by way of examples, of specimens, I will commence by the succinct recital of a few cases bearing upon tardy hereditary syphilis. And these cases I shall have no need to go very far for; I will take them—for the greater part, at least—right here, in our wards, where you have been able, where you are still able, to study them at leisure.

Recall to your minds then, gentlemen, that little child four and a half years old who, for some months past, has been regularly brought to us by its mother at our Wednesday consultation. When we saw it for the first time in March last it presented two eminently specific lesions, to wit: on the one hand, an interstitial keratitis as precisely accentuated as possible, a type of those cases of keratitis which Hutchinson has so well described, and of which I shall soon have to speak to you in detail; on the other hand, a double sarcocele, characterized by a hard, ligneous, nodular tumefaction of both testicles.

In the presence of these two lesions, and before any interrogation of the mother, we concluded at once upon syphilis, and, according to every appearance, a syphilis of the order hereditary. But this diagnosis, you know, has been trebly confirmed since then: 1st, by the confessions of the father, who has informed us that he had contracted the syphilis a few years before the birth of the child; 2nd, by the account of the parents telling us that their child had been affected at the age of a few weeks with several lesions considered as syphilitic and treated as such by their physician, to wit: multiple ulcerations about the genital organs, mucous plaques of the mouth, scabby lesions of the hairy scalp, etc.; 3d, by the rapid success of specific medication, which in the space of about a month did away with two of the above-mentioned manifestations.

The second example is borrowed from my city practice, and this is a beautiful example of those cases of cerebral syphilis of infancy which are so frequently confounded with the cerebral manifestations of some other nature, notably with tubercular meningitis.

A man affected with syphilis marries prematurely. He is not long—a common result in such cases—in contaminating his young wife, upon whom I discover an indurated chancre of the lip, soon followed by secondary manifestations.

Of this infected couple is born an infant who, three or four weeks later, presents some slight but incontestable symptoms of hereditary syphilis (erosive syphilides of the buttocks, syphilides of the mouth, etc.).

It is treated and is cured.

Seven years and a half pass by, then, without anything whatever of a suspicious nature recurring upon the child. Then behold, in a full state of apparent excellent health, symptoms as curious as unexpected arise, symptoms which further on I will describe to you in detail, but which for the present it will suffice to enunciate: the child, in the space of a few weeks, is completely changed as to intelligence and as to character; up to that time intelligent, attentive, industrious, he is transformed into "a bad pupil," inattentive, indifferent, idle, who never works any more except against his will, who no longer performs or performs badly his duties, who no longer learns his lessons, who forgets what he knew, etc. Besides, from the lively and forward child that he was, he has become dull, apathetic, sad, silent, "grumbling." From time to time he experiences attacks of vertigo, of singing in the ears, of dimness of sight. He suffers with his head; sometimes he even suffers to that degree that they are enforced to put him to bed, and, in these moments of the fit of pain, he cannot tolerate the light; he has to be left in darkness. A few weeks pass thus in a vague state of malaise. Then, all at once, an epileptic fit breaks out, suddenly the child falls deprived of consciousness, struggles in "frightful" convulsions, froths at the mouth, bites his tongue, passes his urine, and goes to sleep. Two other fits of epilepsy (grand mal) succeed the first in the space of a week.

I was called in at that time. Knowing the specific antecedents of the family and of the child, I have neither trouble nor merit in recognizing the real state of the case. It is assuredly—and very fortunately, besides—to a cerebral syphilis that are to be referred the present symptoms, especially the fits of epilepsy. Consequently, I prescribed a mixed treatment, with strong doses. The result confirms my diagnosis. Under the influence of this medication, the pains in the head and the congestive troubles are dissipated as if by enchantment; the epileptic fits no longer arise; the intelligence is re-established, etc.—in short, there is a cemplete disappearance of all the symptoms; cure. Herethen, very certainly is a case of incontestable cerebral syphilis, and cerebral syphilis arising in a child seven and a half years old, in consequence of an hereditary infection.

Third case, and this relative to a child a little more advanced in years. A little boy of eleven years of age is sent to us for frightful lesions of the mouth and nose—to wit, in a very summary manner: a vast necrosis affecting the superior maxillary, and having already determined the loss of several teeth; osseous lesions of the nasal fossæ, perforation of the septum, discharge and ozœna, recent ulceration of the vail of the palate, just producing "a hole in the palate"—that is to say, a perforation of the vail above the uvula. The aspect alone of these lesions allows us at once to affirm the presence of syphilis, which, moreover, is attested by the vestiges of two anterior lesions, corneal opacity, left by a keratitis, dating back three years, and deformity of the tibia, consecutive to a hyperostosis arising about the same time. We administer the specific treatment, and we find our diagnosis confirmed by the immediate amendment of the lesions, which are repaired and cured—at least to the extent to which they were still curable.

But from whence came this syphilis?

The inquiry opened as to this subject informed us: 1. That the child, nourished by its mother and reared in her family, had incurred from this fact no risk of contagion, and that it had, besides, never presented the least suspicious symptom beyond the above-described lesions. 2. That the father was syphilitic, and that, moreover, he was in full secondary eruption at the moment in which the child was conceived. 3. That at the same time the mother was affected with different symptoms—cutaneous eruptions, alopecia, angina, etc.—which, in all reasonableness, ought to be likewise referred to syphilis. Here, then, gentlemen, are three cases of hereditary syphilis in which specific symptoms manifested themselves at four, seven and ten years; and I could cite several other similar cases.

These three cases, observe it well, are surrounded by all the evidences of authenticity. The incontestably specific character of the lesions, the criterion of the treatment, the inquiry as to the parents, acknowledging themselves to be syphilitic, etc., everything is found united here in favor of the demonstration which we are seeking. These are complete and typical cases; there is nothing wanting. There is nothing wanting, did I say? I am mistaken, perhaps, in the opinion of some of our confrères, who accept nothing as proven without the sanction of pathological anatomy. Certain sceptical minds accept only the demonstrations upon the table of the amphitheatre. However strange in character an exigency of this kind may be, let us not recriminate, since we have the means of satisfying it. Here is, then, as a complement of the proof, an anatomical fact, which I will borrow from others, in order not to give up the stage all the time to my own personal observations. A foreign author (Dowse *) has reported, with long and interesting details, the following case, which it will suffice to resume in a few words:

Child born of a syphilitic father, delicate, but presenting no serious symp-

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* Thomas Stretch Dowse, "Syphilis of the Brain and Spinal Cord," New York, 1879, page 71 *et seq.*

toms up to the age of ten years. At this time development of a tuberculo-ulcerous syphilide of the face, mutilation of the nose, the extremity of which is destroyed, ozœna, anosmia, etc. Then, soon afterward, invasion of a cerebral syphilis, which betrays itself by a host of symptoms, such as cephalagia, with nocturnal exacerbations, epileptic seizures, intellectual troubles, disorders of vision, ocular paralysis, facial paralysis, anasthesia of one-half of the face, disturbance of the equilibrium, stupor, aphasia, partial hemiplegia, etc. The child succumbs, and the autopsy, to speak only of those lesions which are most convincing in regard to the matter which now interests us, reveals the following:

1. Three gummous layers reposing upon the convexity of the hemispheres adherent to the dura mater and produced from its tissue.
2. Vascular lesions, exactly identical, whether to the naked eye or by histological examination, with those so well described by Heubner, and which, by common consent, constitute the type of what is called at present arterial syphilis.

What more could you wish, and what case could ever be more convincing? I shall not, then, insist further. In all that concerns infancy our proofs are complete. Let us see, now, if tardy hereditary syphilis is equally demonstrated for more advanced ages.

In adolescence the cases are still very numerous. I will cite you a few of them, taken almost at hazard from among those at my disposition.

A report communicated by Dr. Surmay (De Ham) to the Surgical Society is relative to an infant who, born of syphilitic parents, commences to show at the age of three weeks a few specific symptoms, is cured by an appropriate treatment, passes beyond sixteen years without presenting anything suspicious, then is affected at that time with an osteo-periosititis of one tibia. This lesion (which, as we shall see, is one of those which tardy hereditary syphilis most frequently exhibits) is recognized as syphilitic, combatted with iodide of potassium, and is completely resolved under the influence of this remedy.

"I was acquainted," said Dr. Surmay in the commentaries annexed to the report, "with the antecedents of this young man, having treated him for the syphilitic symptoms which he had experienced in his infancy. I was then immediately enlightened as to the nature of this osseous lesion. But what would have happened if another physician than I had been consulted in regard to this last lesion? At the time when it made its appearance the father was dead, and the father alone had any knowledge of the syphilis of his child, as well as of the syphilis of his wife, who was ignorant of her own disease. The veritable origin of the affection would doubtless have remained unrecognized, and, instead of the syphilis, scrofula would have been diagnosed. This is, in fact, do not doubt it, what has most frequently taken place; under such circumstances, the diagnosis of scrofula is substituted almost invariably for the diagnosis of hereditary syphilis.

Another observation, due to Hutchinson, presents to us a syphilitic child, born of syphilitic parents, who, without speaking of a double kerato-iritis which showed itself in infancy, was affected toward eleven years of age with divers diathesic manifestations, to wit: hypertrophy of the liver, ascites, albuminuria and "osseous nodosities," extraordinarily multiple. These osseous swellings, voluminous and hard—of which some are represented in Hutchinson's beautiful "Atlas"—occupied at the same time the two humerus, the two ulnæ, the two femora, both tibiæ, both fibulæ and one elbow.

Likewise, Dr. Horand has related the case of a young girl who, born of a syphilitic mother, was affected, when from twelve to fifteen years old, with a kerato-conjunctivitis, to which succeeded a nephelion; then, at the age of eighteen years, with a palatine necrosis with ozœna. This last lesion resulted in a perforation of the palatine vault, with peripheric ulceration. Subjected to the iodide treatment, it was modified "in the space of a few days," and cicatrized completely.

Look, again, at this beautiful specimen, due to the well-known talent of M. Jumelin. It reproduces nature so faithfully that each one of you at first sight has already recognized a type of gummous lesion. It is, in fact, a gummous ulcer, which evidently establishes its claim as such both by its elevated borders, notched *a pie*, and by its areola of a sombre red, and, still more, by its unequal, hollowed, core-like bottom, etc. The specific treatment, moreover, has given here the proof of the specific nature of the lesion by curing this vast ulcer with a significant rapidity.

But what patient presented this lesion? A young man, eighteen years of age, who, by his own act, has never yet been exposed to any risk of contagion. But he is the son of a syphilitic woman, who was contaminated by a nursing child twenty years ago. And, besides, the hereditary influence of syphilis betrays itself still upon him by a corneal opacity, the remains of a former keratitis, not less than by dental malformations, of which I shall soon have to talk to you.

You see, then, that for adolescence, as well as for infancy, our thesis is proven. It is undeniable that syphilitic heredity may betray itself in the adolescent by divers manifestations of a specific nature.

Does this hereditary influence stop there? By no means. It is very certainly prolonged further into life, and this it is that remains for me to establish.

You doubtless remember a young man, twenty-four years of age, who occupied some months ago bed No. 25 in Ward Henri IV., and who had been brought here by two large and deep ulcers of the tongue; the aspect of these lesions was so characteristic that our diagnosis was at once established. It was manifestly a question, beyond all possible dispute, of gummous lesions, as clearly showed at the same time both the deep excavation of these ulcers, and their borders notched *a pie* in the midst of indurated tissues, their circular configuration, and their yellow putrescent bottom, whence were detached with the forceps sphacelated shreds, etc. A differential diagnosis was not even instituted from cancer, epithelioma, tuberculous ulcer, any more than from every other lesion foreign to syphilis. The treatment, moreover, settled the question in a short time; for these lesions, which were truly hideous and threatening, the fifteenth of January, were found cured, absolutely cured, the seventh of February, under the sole influence of the iodide medication. Such lesions cured in three weeks by the iodide of potassium is equivalent, gentlemen, to a mathematical demonstration of their specific nature. It is only upon syphilis that the iodide exercises as powerful and as rapid an action.

And yet, this young man, at great length and very carefully interrogated by us upon different occasions, denied all antecedents of syphilis. He never had had either chancre or erosion upon the penis or elsewhere, or eruptions upon the skin, or sores in the mouth, or crusts upon the scalp, or falling out of the hair or enlarged cervical glands, etc. In a word, we found nothing about him which could have any connection with an acquired syphilis. And, on the other hand, a retrospective inquiry, patiently and minutely instituted by my chief assistant, Dr. Brocq, gave us the following information :

1. That the patient was born of a father incontestably syphilitic, who had been treated at the Hopital du Midi by the venerable Dr. Puche for "symptoms of constitutional syphilis."

2. That the mother of the patient had been treated likewise, and upon different occasions, for manifestations of syphilis.

3. That our patient, finally, had been very positively affected a month after his birth with "mucous plaques" about the mouth and anus, for which a mercurical treatment had been prescribed, etc., etc.

What could be clearer as to history, what more complete as to *ensemble*, and, altogether, what more satisfactory ? Suppose for a moment, gentlemen, that instead of the preceding case I had related to you the history of a patient who, having contracted syphilis at twenty years of age, should be affected twenty-four years later with lingual gumma.

What objections could you see to offer against such a fact? Not a single one. You would find this fact absolutely correct, perfectly normal, and conformable in all points to the classical evolution of syphilis. For, if there exists a truth unfortunately too well demonstrated, it is the persistence of the syphilitic diathesis in the human organism ; it is the longevity, I might almost say the perennial existence of this diathesis, which betrays itself still by different symptoms, and by symptoms of which you understand the great gravity, twenty years, thirty years, forty years and more after the debut of the infection.

Well, gentlemen, this fact which you would accept as normal, regular, conformable to the habits of syphilis, is exactly (difference of age apart) the history of our patient. In our patient, as in the preceding, it is a syphilis which, twenty-four years after the first contamination, has revealed itself by gummata of the tongue. Only, for him, the primary contamination dated from intra-uterine life, while in the second we have supposed it arising at twenty years of age. But syphilis, contracted at no matter what age, is always syphilis, and I do not really see why the syphilis contracted *in utero* should be incapable of producing what the syphilis of extra-uterine contagion produces, that is to say, of determining such or such symptoms at a time more or less remote, of producing a chronic evolution, an indefinite duration, etc. I ask myself, and I inquire honestly what there is illogical in admitting that a syphilis which infects a human organism before birth can do what a syphilis under any other conditions can do, that is to say, subsist in that organism, and betray itself more or less tardily by different symptoms.

What would be illogical, it seems to me, would be to suppose the contrary; that is to say, to confer upon hereditary syphilis a faculty of extinction, of cure, which unfortunately is far from being its lot.

But let us pass on, for truly, in the name of good sense, the evidence is conclusive, and it is manifest *a priori* that hereditary syphilis ought to be susceptible of the same evolution and of the same longevity as acquired syphilis. Besides, everything here comes under the facts, the evidences of clinical experience, and you have just seen that the facts fully confirm what theory permitted us to expect.

One more example will finish the evidence, and this shall be the last, for I am really beginning to fear wearying your attention by the monotonous detail of observations always more or less analogous to each other, as well as prolonging beyond what is necessary an accomplished demonstration. We had in our wards recently a man, twenty-eight years old, who had entered the hospital for a gummous syphilide, occupying the anterior aspect of the leg and developed upon a tibia in a state of chronic hyperostosis (chroniquement hyperostosé). In this case, still, the diagnosis was clear, indisputable; it was, moreover, verified by the prompt success of the treatment, which dispersed the cutaneous lesion in the course of a few weeks. And yet this man denied energetically any antecedent acquired syphilis.

From various considerations, which I will pass over in silence in order to abridge, we were led to believe in a hereditary syphilis as the origin of the symptoms which we had under our eyes. An inquiry was instituted in that direction, and this inquiry was not long in revealing to us the following:

1. That the father of the patient had been, according to all appearances, affected with syphilis, and that anteriorly to the birth of his son; that at all events his wife was surely syphilitic, since, sixteen months after the birth of the child, she lost the vail of the palate and the uvula in consequence of specific accidents.

2. As far as concerns our patient personally, that at the age of three months "he had been admitted into the hospital of l'Enfant Jésus for eruptions which Dr. Trousseau considered as syphilitic and treated by a specific medication, especially by baths of sublimate;" that at five years of age he was affected with osseous lesions involving both elbows; that at seven he suffered a long time with grave ocular inflammations, which compromised his sight; that at twelve one of his tibias commenced to tumefy; that at fifteen a new series of symptoms far more grave made their appearance, to wit: intra-nasal ulcerations, osseous lesions of the nasal fossæ, necrosis, then falling in of the nose; extensive ulcerations of the vault of the palate, of the vail of the palate, of the pillars, of the tonsils, of the pharynx; mutilation of all these organs, which are to-day partly absent, partly covered with large cicatrices, etc.; finally, that, later still, there occurred new ulcerations upon the upper lip and the nose, and that about the same time there appeared a necrosis of the superior dental arch, etc.

In a word, here is, in a patient born syphilitic, a whole series of specific symptoms strung along from the age of three months up to the age of twenty-eight years, all symptoms bearing the seal of syphilis, and serving, if I may so speak, as reciprocal witnesses from the point of view of their common origin. What more convincing observation could one desire to show that syphilis begotten *in utero* has the faculty of pursuing its victims, even to adult age, exactly as we see every day syphilis acquired in youth extend its manifestations up to an advanced period of life, even to extreme old age?

I will stop here, gentlemen, and that for two reasons: because, in the first place, I consider the demonstration that I was seeking complete; because, in the next place, I do not yet possess personal observation establishing the undeniable authenticity of symptoms of hereditary syphilis beyond the age of thirty years.

I know very well that cases have been cited in which the hereditary influence of syphilis is said to have extended to a later period of life, to have been prolonged to forty, forty-four, forty-six, even to sixty-five years! But these cases, of which I will speak later in order to discuss them in detail, do not offer, I may say at present, that ensemble of scientific guarantees which renders indisputable the observations of which I have spoken to you above. I will leave them on one side. I will intentionally pass them over in silence, and that in order not to compromise by equivocal statements, exposing the side to criticism, the thesis which I have brought out and sustained so far in comparison with facts which, for my part at least, I deem irrefutable.

And let no one reproach me with this rigor in regard to authors who have reported the cases in question, whom I exclude for the moment from our list; for an excessive rigor is necessary, indispensable, in a subject such as ours, in which everything is discussed, controverted, denied; in a subject the very existence of which is held in suspicion by some of our confrères. My duty, it seems to me, is to select solid materials for the edifice which I seek to erect; that is to say, to make use exclusively of complete, irreproachable observations, and my right, surely, is to bring to the trial which is going to be instituted only those facts of which I accept and bear the responsibility.

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# ORIGINAL ABSTRACTS.

ELECTRICITY IN INSANITY OF SEVEN YEARS DURATION.—Dr. Robertson (*Journal of Mental Science*, April, 1884) has had under observation the following case: A fifty-year-old woman entered the hospital under his care with delusions of persecution and suspicion, which had existed for six years prior to admission. Fifteen months after admission treatment by galvanism was commenced, the patient's condition having up to that time remained unchanged. The continuous current from a Leclanche 40-cell battery was used. The positive pole was applied over the superior cervical sympathetic ganglion, and the negative was slowly moved from the brow to the occiput, and up to the middle line of the skull the same side of the head for about seven minutes, then changed to the other side and applied for the same time. The patient gradually, and with some ups and downs, improved; the strength of the battery having had to be gradually diminished as the patient became more sensitive to its influence. The patient, by March 19, 1883, had completely recovered and was discharged. At last accounts (January 20, 1884) she had continued well. A curious and interesting observation bearing on the pathogeny of hallucinations occurs. The patient (November 10, 1882) heard voices of men; January 10, 1882, she did not hear the voices unless she made an effort, and then only a little. This she thinks shows that the voices are *in her head and not real.* It is probable that the psychosis (*Journal of Nervous and Mental Disease*) was a vaso-motor one of climacteric origin, and the beneficial results obtained hint at the propriety of further experiments of this kind in such cases.

THE SUCCESSFUL REMOVAL OF A TUMOR FROM THE BRAIN.—Another triumph (*Med. Record*) has been added to medicine and another tribute made to the practical value of physiological and experimental science. For the first time in history a tumor of the brain, having been precisely located by the symptoms produced, has been successfully removed by a surgical operation. The patient was an inmate of the Hospital for Epilepsy and Paralysis at Regent's Park, London, Eng., and was under the care of Dr. Hughes Bennett and Mr. R. J. Godlee. He was a farmer, aged twenty-five, who had been in good health until three years before. He then began to suffer from paroxysms of twitchings in the left side of the face and tongue. Attacks of general convulsions with loss of consciousness supervened, and for two and a half years he continued to suffer from the local spasms and epilepsy. Then spasmodic twitchings of the left arm appeared, and the general convulsions ceased. After several months the arm became paretic and the left leg began to twitch. The patient suffered from violent headaches, attacks of vomiting, and had a double optic neuritis. The conclusions drawn by Dr. Bennett were: first, that there was a tumor in the brain; second, that this growth involved the cortical substance; third, that it was probably of limited size, as it had destroyed the centres presiding over the hand, and only caused irritation without paralysis of the centres of the leg, face and eyelids which surround it; and fourth, that it was situated in the neighborhood of the upper third of the fissure of Rolando. It was decided to attempt its removal. Accordingly, on November 25th, Mr. Godlee trephined the skull, and removed a triangular piece of bone over the region corresponding with the upper part of the fissure of Rolando. After the bone was removed, the dura mater slit up, and the cortex of the brain exposed, no tumor was visible. The ascending frontal convolution, however, seemed to be somewhat distended. An incision about an inch long was therefore made into the gray matter in the direction of the blood-vessels, and one-fourth of an inch below the surface a morbid growth was found. This was carefully removed, and proved to be a hard glioma about the size of a walnut. The superficial part of this was distinct from the brain-matter and was easily enucleated. The hæmorrhage was arrested by means of the galvano-cautery, and the wound brought together by sutures. Since the operation the condition of the patient has been satisfactory. The temperature did not rise above 100° F. The mind has been clear, the lancinating pains, vomiting and convulsions have ceased. A hernia cerebri has formed, however, and the paresis of the left leg has increased. The outcome of the case will be watched with the greatest interest, as opening up a new field for the display of diagnostic acumen and surgical skill. We say this while fully aware that the case in question is really alike in some respects to others that have been operated upon for traumatic epilepsy.

MISCARRIAGES.—Dr. E. H. Coover (*Med. and Surg. Rep.*) says, of the causes which lead to the destruction of embryonic life, and the premature arrest of utero-gestation: "They may be classed as predisposing and exciting. Among what may be termed predisposing causes may be enumerated general irritability of the system, deficiency in the nutritive function, the susceptibility of the uterus to sympathetic affections, *uræmia*, and some forms of *toxæmia*. The exciting causes are the application of violence, either directly to the uterus itself or to some distant organ, which may in return, by a sort of reflex action, exert an influence upon it, jumping from a height, falling down stairs, sudden fright, blows upon the abdomen or back, the internal introduction of knitting or crochet needles, the use internally of highly stimulating decoctions and active purgatives, all form exciting causes, and are fruitful agents in bringing on abortions."

THE ESSENTIALS FOR THE SAFE ADMINISTRATION OF ETHER.—Dr. David W. Cheever concludes an article on the administration of ether in the *Boston Med. and Surg. Jour.* by giving the following essentials for its safe use: An empty stomach; a loose neck; a free abdomen—no corsets or skirt bands; removal of artificial teeth; an easy, semi-recumbent position; a sponge wrapped in towels for the ether; a gag, and forceps for the tongue. When stertor occurs, the patient should be tipped forward, the cheek opened with two fingers, the tongue drawn out, the fauces swabbed. To *insure* safety, the surgeon should hear every respiration of the patient. Anæsthesia from sulphuric ether is of two forms: 1. Primary anæsthesia, which is a moment of confusion coming on after a very few inspirations. At this moment a felon can be opened without pain, and the patient wake at once. 2. Comatose anæsthesia, for prolonged operations. Ether *may* be given almost indefinitely. To relieve the hopeless agony of tetanus, I have had it administered for twenty-four hours. If you would avoid asphyxia, nausea and headache, and be *safe*, use only the best and the purest anhydrous sulphuric ether.

ERGOT IN THE TREATMENT OF CONSTIPATION.—Dr. Granzio (*Allgemeine Medicinische Central-Zeitung, Practitioner*) reports two cases of constipation, following the abuse of purgatives, relieved by ergot. Three doses of ten grains each were given at intervals of two hours, and were followed by a copious evacuation. A second stool occurred spontaneously the next day, and, after the administration of ergot in smaller doses for a few days, a definite cure was obtained. The constipation was due to the atony of the muscular wall of the intestines.

THE USE OF COLD IN LABOR.—Dr. Grognot (*Bull. Gen. de Thérap.*) recommends the use of cold to produce and increase labor pains. It is well known that to palpate the abdomen in a pregnant woman the hands must be of approximately the same temperature with that of the skin of the patient; otherwise, if too cold, the disagreeable sensation will produce immediate contraction of the muscular walls of the abdomen, and prevent a proper examination. But, if persisted in, this may extend to the uterus itself, and give the sensation of the presence of a regular globular tumor, contracting, not from the pressure, but from the effects of the cold. There are uteri which contract upon the slightest touch, but they are rare, and pressure generally produces no such effect. In consequence of these observations, Dr. Grognot uses a wash-basin or bucket of fresh water, into which, when it is deemed desirable to provoke pains, or to accelerate labor, he places his hands for one or two minutes, and then applies them over the abdomen, and as fully as possible over the region which covers the antero-superior surface of the uterus. In a few seconds the patient complains of a pain, and the hands are removed. It is sufficient to use fresh water, as a greater degree of cold would not hasten contractions to any greater extent. To this may be added manual pressure and manipulation. It is generally not necessary to use this method more than ten or fifteen times. The following are his conclusions: 1. The application of cold provokes marked contractions during labor. 2. They are normal in their effects. 3. This method is without danger to the mother or child. 4. It can be used independently and without instruments. 5. It can be employed during all the stages of labor for the expulsion of the fœtus, and also for the removal of the placenta.

Labor in a Girl Aged Eleven Years and Nine Months.—Dr. T. H. Stallcup (*Weekly Med. Rev.*) delivered a girl only eleven years and nine months old of a child that was asphyxiated when born, but was revived by the use of tepid bath, blowing in the mouth, etc. The child, a girl, weighed a little less than seven pounds. She only lived a few hours. There was a bruise upon the side of the head and face, which was claimed was caused by the mother's slipping off a gallery which was frozen over, and striking her side upon the ends of the planks. The young mother recovered.

Treatment of Gastrodynia.—Dr. John W. Martin (*Med. Press*) reports the following instructive case of this obstinate and troublesome affection: Miss R., æt. 20, came under my care October 3, 1884, suffering from pain in the stomach after meals, and the consequent dread of and loss of desire for food. When seen she looked quite worn and thin; complexion sallow; lips and gums anæmic; tongue whitish and lightly furred; bowels constipated. She felt a daily-increasing sense of weakness and inability to attend to her duties. Physical examination yielded negative results as regards the condition of the various organs. The case seemed one of dyspepsia consequent upon anæmia. The uterine functions, with the exception of paleness of the menstrual discharge, normal. I at first ordered bismuth, soda and tr. nux vom. mixture with chloroform water; and calomel, colocynth and hyoscyamus pills to regulate the bowels. This giving no relief, I changed to pills of reduced iron and extract of nux vomica with meals, and as a laxative a mixture of sulph. mag. carb., with peppermint water. Again no relief being experienced, I placed her upon the following prescription:

| | | |
|---|---|---|
| ℞. | Sodæ bicarb | ʒ iss |
| | Tr. nucis vom | ♏xl. |
| | Liq. morph | ʒ j. |
| | Sp. am. aromat | ʒ iss. |
| | Syrupi zingib | ℥ j. |
| | Aquæ menth. pip. ad | ℥ viij. |

M. ℥ j. to be taken four times a day.

The relief was immediate, and so far has proved permanent. Pain is now rarely felt, and only after indiscretions as to food. Relish for her meals has returned. She is now taking the reduced iron and extract of nux vomica pills with meals, and finds decided benefit from them. The bowels are regular, the tongue clean, and her complexion and general appearance much improved. I am inclined to think the small dose of opiate was just the one thing wanting in my previous treatment to help the lame dog over the stile.

Cocaine Hydrochlorate in General Surgery.—Dr. T. J. Alloway (*Can. Med. and Surg. Journal*) reports the following: The patient was a young married lady in whom a retro-vaginal abscess had formed after a pretty sharp attack of pelvic cellulitis. The abscess was situated in the cellular tissue between the rectum and vagina, extending from the posterior fornix downwards to the perineal body. The patient was placed on her back in the lithotomy position, and a small Sims' speculum passed under the arch of the pubis. The whole of the posterior wall of the vagina was painted over with a four per cent. solution of cocaine for the period of about ten minutes, using about twenty minims in all. The incision was then begun downwards through at least a quarter of an inch of infiltrated tissue. A director was then pushed forcibly forward for some little distance before the abscess cavity was reached. During the whole of this procedure the patient declared to us whenever questioned that she felt no pain whatever. The anæsthesia lasted about twenty minutes, after which she felt the slightest touch acutely.

# SELECTIONS.

## THE HYDROCHLORATE OF COCAINE IN GENITO-URINARY PROCEDURES. By FESSENDEN N. OTIS, M.D.

My attention was first attracted to the probable value of the hydrochlorate of cocaine in genito-urinary troubles by my friend, Professor C. R. Agnew, who gave me an early account of his gratifying success in operations on the eye (subsequently published), and also kindly gave me sufficient of the two-per-cent. solution to try its effect on the mucous membrane of the urinary passages. Before a suitable case presented I received a note, November 6th, from Professor R. W. Pease, of Syracuse, giving me an account of his use in the urethra of a four-per cent. solution in an operation for stricture an inch and a half back of the meatus, on the day previous. "About twenty drops were used with a common dropper, stopping the progress of the solution backward by holding my finger on the urethra back of the stricture, and retaining it in the canal about eight minutes. The sensation was about nil. I ought to have retained it fifteen, and I think then the success would have been complete. . . I have used the cocaine in a sensitive urethra, when catheterization was very painful, with charming results." He concludes: "I make no doubt in this new agent we have something that will entirely take the place of ether in all operations on the penile portion of the urethra." On the day following (November 7th), I dropped a few drops of the two per cent. solution received from Dr. Agnew into the first inch of a very sensitive urethra, holding it in ten minutes. I dilated the orifice from 27 mm. to 31 mm., preparatory to an operation for litholapaxy, which was to be done on the following day, and I did not wish to incise. This patient was very hyperæsthetic, but gave not the least evidence of pain during the operation. November 11th, Dr. Coonley, of Staten Island, called with a patient suffering agony from frequent and difficult micturition. A stone in the bladder was suspected, but the doctor said it was impossible, and that the intense pain was caused by the attempted introduction of instruments to get a satisfactory examination, and the patient was averse to the use of ether. He was obliged to urinate before anything was done, and it was at least five minutes, after passing a few drachms of urine, before the vesical tenesmus was fairly over. I then injected, with an ordinary penis-syringe, about fifteen drops of the solution given me by Dr. Agnew, and pressed it back into the urethra as far as possible. The patient retained it by pressure at the orifice for ten minutes. This was repeated, and at the end of the second ten minutes I introduced and passed a silver searcher (Thompson's) through the urethra (detecting a scale of calculous material *en route*) and into the bladder, without causing the least pain. I struck a stone in the bladder. I then took a large-sized Thompson's lithotrite, and introduced it with some difficulty through the preputial orifice, which was not only contracted, but adhered to the orifice of the urethra. There were also two bands of stricture within the first inch of the canal, which impeded the progress of the lithotrite. By a little perseverance, however, I passed by these obstructions, and carried the instrument into the bladder, grasped a stone of a diameter of one inch, and while holding it, struck another stone, thus demonstrating the presence of at least two stones.

I then disengaged the lithotrite and withdrew it, tightly hugged in the anterior part of the canal. The patient stated, with great unction, that he felt not the slighest pain during the entire procedure. I then divided the preputial orifice freely, also the meatus and the strictures previously mentioned, with a straight, blunt bistoury. Not the least flinching or sign of pain was observed, and the patient stated that he felt only a slight twinge when the second stricture was cut. This was fully ten minutes after the second introduction of the cocaine.

Delighted with the success in producing perfect local anæsthesia in this case, I immediately determined to use it in a case of hyperæsthetic urethra, associated with enlarged prostate, where, on account of the intolerance of the urethra to any sort of interference, the introduction of the catheter for emptying and washing of the bladder had been entirely suspended for several weeks. I had quite used up the solution given me by Dr. Agnew, and the leading drug stores could not furnish it. I at last succeeded in getting half an ounce of a two-per-cent. solution. The patient (who was also a professional friend) was most anxious to have it tried, and was full of hope that this would enable him to have the necessary catheterization performed. The great dread of any interference made him insist that the solution should be introduced very slowly and gradually. It was fortunate that he did so, for, when not more than three or four drops were injected into the urethra, he became almost frantic with pain, and it was only after half an hour that the intense suffering caused by the injection passed entirely off. The action of this two-per-cent. solution, presumably of the same kind as that used in the previous case, made me fear that, as with other anæsthetics, there were idiosyncrasies in some persons that would contraindicate its use. On making inquiry, I ascertained that there had been a number of cases met with where, a four-per-cent. solution of hydrochlorate of cocaine being used in the eye, a period of thirty or forty seconds of quite sharp irritation preceded the anæsthetic effect, and, also, that at least one case of sharp urethritis had been directly caused by its application to the urethra. On making close inquiry, I at last ascertained that the druggist from whom I obtained the solution, having none of the hydrochlorate on hand, *had dissolved the alkaloid in hydrochloric acid*, and had used this extemporaneous hydrochlorate for my solution.* Having the good fortune to obtain a small bottle of Merck's crystals of the hydrochlorate of cocaine, I made a two-per-cent. solution with distilled water, in which two per cent. of biborate of sodium had been dissolved, and on a second trial in the same case, where so much suffering was caused through the impurity of the solution, I succeeded in applying it to the urethra, as in the previous case, and in passing a catheter, drawing off the urine and washing out the bladder without the least pain. On the 20th of November, in my clinique at the College of Physicians and Surgeons, I introduced a similar solution into a very sensitive urethra associated with senile hypertrophy of the prostate. A preliminary attempt to pass a catheter caused manifest pain. After the retention of the four-per-cent. solution of hydrochlorate of cocaine for ten minutes in the urethra, the catheter was passed through the urethra, and subsequently the bladder was examined for stone, and not the least complaint of pain in the urethra was made.

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* I subsequently tasted the cork of the phial containing the solution, and found that a sharp stinging sensation quickly followed, and continued to be felt for ten or fifteen minutes. On applying Merck's four-per-cent. solution of cocaine to my tongue, in the same way, only a slight furry feeling was produced, reminding me of a weak solution of aconite.

On the 23d I introduced a four-per-cent. solution into a fairly-tolerant urethra to a depth of four inches, and retained it ten minutes. I then divided with my dilating urethrotome a dense stricture half an inch broad and five millimetres thick without the least shrinking on the part of the patient, who stated that he had only the feeling of distension, and not the slightest sense of pain during or subsequent to the operation. I have made several experiments since, and find that the best mode of introducing the cocaine solution for relief of irritable urethra, especially when associated with prostatic trouble, is to attach a tight-fitting half-ounce penis-syringe to an open-end rubber catheter of eighteen or twenty mm. in circumference. After pouring the solution into a small graduate, draw a sufficient quantity up into the catheter. Introduce it for a half inch, or until the patient complains of pain; then press down the piston, gradually driving a few drops in advance of the catheter, rubbing it along with the finger, waiting for three or five minutes, then passing it down about two inches farther, and repeating the process of coaxing the fluid back until finally the end of the catheter enters the bladder, consuming altogether about fifteen minutes.

It will, I think, be proved that the greatest good will come from the use of the cocaine in the cases of irritability of the deep urethra associated with prostatic disease. In these cases the passage of a catheter, so essential to the comfort and even the life of the patient, is frequently rendered painful, and not rarely impossible, by spasm of the deep urethra. The use of cocaine promises quickly to reduce both the pain and the spasm, and allow of the easy passage of the instrument, and this, too, by a procedure quite within the province of an intelligent patient to use after proper instruction. A four-per-cent. solution of the hydrochlorate of cocaine in almond-oil makes an excellent lubricant for urethral instruments, and I think may prove even better than the watery solutions for application to the urethra. Its use in this way, in a few cases, has been very satisfactory.

The value of the solution of hydrochlorate of cocaine will be equally found in examinations of and operations upon the irritable anus and rectum. Yesterday I had occasion to examine a case of deep and irritable ulcer involving the tissues around the anus fully three inches in circumference to a depth of fully half an inch, and extending inward an inch or more beyond the margin of the external sphincter. The patient was an old woman of sixty, who had been worn to the last degree of irritability by nearly two months of suffering. After painting the surface of the ulcer with a four-per-cent. solution for ten minutes, I then introduced a bivalve speculum and exposed the whole inner surface, and cauterized it thoroughly, without the least expression of pain from the patient.—*N. Y. Med. Journal.*

## DIPHTHERIA: ITS ETIOLOGY AND TREATMENT. Read in the Section of Public Medicine. By ALFRED CARPENTER, M.D.Lond., M.R.C.P.Lond.

The etiology of diphtheria is still a disputed point. There are many reasons why this is to be regretted; the most important being that treatment must be empirical until its causation is determined with certainty. Intimately associated with causation are the sequelæ which follow upon its incidence; and no explanation will be satisfactory which does not thoroughly explain them. These latter may be divided into two sections: those which are immediate, and those which probably follow in the relation of cause and effect, but which are at present seldom associated in the mind of the medical attendant with the preceding diphtheritic condition. I propose to show the ultimate relationship between these classes of cases, and to point out that treatment to be effectual must be based upon rational lines, and be followed out on those lines to the termination of the case.

Without asserting that diphtheria and potato-disease are in any way allied to each other, except by analogy, I have been struck by the similarity of the effect produced in both diseases. The breathing-passages are impeded. There is a similar train of results, though in the opposite direction: in the one case, carbonic acid cannot get into the plant to allow the devolution of oxygen; and in the other, oxygen fails to get admission to the blood-current, so as to allow the oxidation of carbon in the various tissues of the body. There are in both cases suffocation, and rapid death when it is immediately severe. If the course of the disease be not so rapid, and death does not arise from asphyxia, the nutritive fluid becomes altered by something which is intimately connected with the causation of the disease itself, and which leads to death either by paralysis or by failure of nerve-power in the human body, whilst in vegetable life it arises from simple loss of power to assimilate the juices upon which the life of the plant depends. There is a blighted state produced, by which the crop is destroyed sooner or later in the course of the season. If both these dangers be escaped, the fruit is permeated by a mycelium which produces seed of its own. The evil day is only postponed; for, when the store is opened in mid-winter, a large portion of the crop is found to be invaded by processes similar to necrosis. Even those potatoes which seem sound are permeated by mycelium, or have resting spores in their buds only waiting for seasonable opportunities to develop into new growths, which will inevitably destroy the potato and prevent any healthy production from that part of it which is so affected. The causation of one kind of potato-rot is recognized as produced by a fungus called Botrytis or peronospora infestans, one of the genus Mucedines or hyphomycetous fungi. They form the commonest moulds upon decaying vegetable substances, and include some parasitic families which produce great devastation in the vegetable world. Their germs are always present almost everywhere, and only want a forcing-bed in which they can develop, and then their effects are immediately manifest.

There is great doubt in the minds of some men as to the capacity of parasitic life either to injure plants or animals which are in vigorous health. It is possible that this doubt has a sound basis, and that we may agree with my great teacher, John Simon, "that a contagium of a given disease, such as small-pox or measles" (I here interpose potato-rot) "has no more power to influence the unpredisposed body than yeast has to ferment alcohol, or turn pure water into beer." I am now inclined to think that this is so; and that, in the absence of some impurity in the blood of the animal, or in the juice of the plant—some material which is the sequence of the act of living, and which material has not been properly excreted out of the system—the germs which set up parasitic disease would fail to find a pabulum in which they could increase and multiply, and that they would be starved, so as to ultimately abort or dwindle away to nothing, and thus fail to establish a colony in their victim. I have taken up this view from a variety of reasons. It is true that it is not indubitably established that infective disease, such as diphtheria, is the result of filth in the home or in its surroundings; but the presence of the disease, in the great majority of instances, is intimately connected with decomposing excreta. I have, therefore, come to the conclusion that, when it fails to be proved to be so associated, from the absence of any such visible cause outside the body, it is because the excrementitious matter had not passed away from the blood of the recipient, and that it was still within the curtilage of the human dwelling-house, that is, within the living precincts of its producers.

The connection of filth diseases with human excreta is a recognized fact. Diarrhœa, cholera and enteric fever are certainly associated with human filth. A relaxed throat with diphtheric exudation is also recognized as intimately connected with similar states, so that a person so affected cannot be cured whilst residing in a given dwelling-house, in which the air is impregnated with the results of sewage decomposition. He must move into a purer atmosphere before the decomposed state of his mucous membrane can be remedied; and why? He is like a man who, under ordinary circumstances, is well able to swim, but with his head just under the water because of heavy boots or other weight loading him beyond his swimming powers. The impure air prevents that healthy assimilation of food by which he would recover power and be able to resist the influence of the fungoid germs which now irritate his mucous membrane, just as some men are from so-called idiosyncracies unable to resist the influence of the pollen of some kind of grasses, and become subject to hay-fever, whilst others do not notice it in the least and are not so affected.

I do not assume that the excreta of a human being retained within his own body are necessarily hurtful, simply from retention. That is disproved every day of one's life, but I contend that it is impossible for an excretory organ to be defective for some time, and to fail in its complete and regular duty, without some minute particles of organic impurity being retained in the juices of the body in a condition which is foreign to their ordinary state. The blood is placed in that form which is analogous to that which obtains in the sufferer from hay-fever; and when a person is exposed to the germs upon which diphtheria depends for its production, he becomes the victim of that disease. If he were not in that particular condition, he would not be affected by diphtheria any more than the majority of us in this room would be affected by hay-fever if we joined a hay-making party. This view of the case will explain why we occasionally find diphtheria in exceptionally clean and healthy neighborhoods. It will explain its hereditary tendencies and the so-called idiosyncracies of those who appear to be especially prone to its ravages.

I have reason to believe that temperature has much to do with the sudden development of diphtheria; that, whilst it is certain that those living on ranges of hills in open country are as much liable to its incidence as the inhabitants of lower regions, it arises at clusters of cottages entirely away from sewers or general water supply, and seems to arise *sua sponte.* It does at times follow lines of sewers in a way that shows that intimate connection with drainage which is suggestive of cause and effect; it is also propagated by milk-sellers, as is shown by evidence which cannot be disputed. It is not more prevalent in hot seasons than in the colder parts of the year, but, on the contrary, it seems more general in the colder months, producing greater mortality during sudden and violent reductions of temperature than at other times. I have always found in these isolated outbreaks that its development has been associated either with washing-day, when hot water has been allowed to flow into the cesspool or drain, or that there has been a communication between the sewer and some steam-engine, which has elevated the temperature of the sewage to blood heat. It is to this point that I especially wish to direct the attention of those who are inquiring into the outbreaks of diphtheria. The connection of tub-night with croup is not unknown. I believe it was in Edinburgh that about forty years ago, at a conference of medical men, it was discovered that Saturday night was the night upon which the majority of the attacks of so-called croup took place among the poor, and that it was shown to be intimately connected with the Saturday night tubbing with which the Scotch were then accustomed to treat their children, and, as a consequence, also with the steamy condition of the rooms in which they slept bringing into sudden activity the germs upon which I believe the disease to depend for its development.

That a particular form of micrococcus is always present in diphtheritic exudation, and that the germ is capable of setting up the disease, has been established upon a sound basis. The germ has been cultivated in the vitreous humor of the eyeball, passing through several generations, and the operator has been ultimately able to reproduce the same disease in another animal in a way which shows its complete identity. These micrococci are excessively minute, probably less than one-thirty-thousandth of an inch in diameter. They have a life history of their own, and, though not identical with botrytis or peronospora, they must have reproductive organs, and probably resting spores, as well as ordinary spores; and I think that they follow the life history of the algæ, as well as being endowed with some of the properties of the fungal tribes.

From analogy, we may assume that the resting spores are much less destructible than the ordinary spores, and are capable of preservation under conditions which enable them to reproduce their kind whenever the conditions arise which are required for the purpose. What are these conditions? The presence (1) of certain forms of excreta; (2) of a certain elevated temperature, not much below blood heat, but below that requisite for the coagulation of albumen; (3) of an atmosphere saturated with moisture, and probably also (4) an excess of carbonic or some other acid in the air, by which the growth of the germ is determined, and (5) some other meteorological or electric manifestation at present entirely unknown. If these states coincide, the resting spore becomes active; it finds material which it can assimilate, and the disease is set up, commencing in the mucous membrane of the throat, that being the very place in which we find moisture, warmth and carbonic acid. The way in which such actions take place is manifest from the fact that the spores of a mushroom cannot be cultivated unless they have been in contact with the mucous membrane of some of the equidæ tribe; so diphtheritic germs, like the pollen of plants which fall upon the stigma of an appropriate carpel, as soon as they touch such a mucous surface at once put forth all their vigor; an invisible mycelium is put out; a change takes place in the character of the fluids of the part, and the disease runs its course, and passes through the various changes which indicate its presence. A felt-like mass forms in the throat; the patient dies asphyxiated, or the blood is so altered by the action of the microderm or micrococcus that the blood corpuscles no longer perform their duty, and oxygen gradually ceases to be assimilated. This leads to a failure of action in certain nerve centres, and paralysis may result. These micrococci have a life history of their own--a definite course to run. They are expelled by some of the excretory organs, and those which escape expulsion die in the course of time, leaving behind them spores similar to resting spores, which may set up seqnelæ in an unexpected manner and at unexpected times. Returning to the conditions, let me say that, as regards the character of the excreta, this must be peculiar; that as scarlatina probably has its origin, when apparently rising *sua sponte*, in the blood of animals which are not in a healthy state, and which is undergoing decomposition or metamorphosis of some kind, so the diphtheritic germ has its apparent origin *de novo* from morbid matter produced in the tissues of animals. It is probable that the excreta of vegetable feeders do not furnish germs which could develop into a diphtheritic micrococcus *sua sponte*.

If the conditions be present, the cells are hatched, and they then are capable of extension by so-called contagion; but even then it is requisite that the recipient shall be in a state fitted to receive it, and, like to the carpel of a fruit, ready for the pollen which is peculiar to it; otherwise, the cell fails to find fitting pabulum for its extension and the development of its reproductive organs.

An elevated temperature is necessary, together with an atmosphere saturated with moisture. I conclude that this is so, because I have always found the coincidence in first outbreaks, and the consensus of opinion points to the necessity for moisture, or dampness, or stagnant water, whenever the disease is epidemic.

I go also to analogy, for the potato disease spreads more rapidly in the damp atmosphere which is found among the rank vegetation of overgrown haulms, or on those days in which the sun is obscured by clouds and the air itself close, full of moisture, and the temperature high. Sunlight and dryness soon remove the incidence of potato blight. The latter, however, probably does not require the elevated temperature which is requisite for the hatching of diphtheritic spores; but the warmth of a day in which thunderstorms abound, but the sun obscured, is sufficient for the purpose.

That carbonic or some other acid must be present is probably the case, because it has been shown that minute fungi grow much more rapidly and much more luxuriantly in such an atmosphere. It is probable that water, which is free from carbonic or other acid in solution, will not be able to propagate even typhoid germs for want of the necessary pabulum, and this accounts for the fact of certain water, apparently free from suspicion of the presence of any infective principle, suddenly developing such a tendency, from having lost its power of neutralizing the carbonic acid, or of discharging it into the atmosphere. In this case, typhoid germs rapidly multiply in the water, and disease is spread by its means, and so it is that diphtheria suddenly springs into activity. There is a rapid fall of temperature out of doors, lasting for a day or two. The school managers in a given school are not prepared for the change; fires are not lighted, but the cold and usually damp air is shut out as much as possible, and the atmosphere of the school becomes highly charged with carbonic acid; and, if it should happen that a child with an infectious throat is present, the disease spreads as rapidly as potato-rot spreads on a favorable day, and if there be excreta of such people in the sewer, the admission of large quantities of hot water force out a steamy air into the closed-up passage from the defective drain.

But how will this explain the sequelæ which frequently follow upon diphtheritic mischief? I mentioned the fact that potato-rot is known to be propagated by the agency of resting spores. These are spores or germs which are shut up in a very resistant envelope, which enables them to retain their vitality in adverse circumstances; so that heat, if it be not much above 212°, and the cold even of zero, will fail to destroy it. These spores may by analogy be fairly assumed to exist. The ordinary spores are evacuated from the system as the patient recovers; but the resting spores remain in contact with the lining membrane of the blood-vessels, or are carried by the blood-current into some of those parts of the body which usually act as filters, and retain matters which are foreign to the blood-current. Perhaps they attach themselves to lining membranes, such as the valves of the heart. They may there, as they develop, set up ulcerative endocarditis; and being detached from the valves as they increase in size, they irritate the membrane; and, being carried on by the blood-current, they produce emboli at the spot to which they are carried. There they multiply, sooner or later, and the sequences of the disease appear as if they were separate and independent diseases, and as such are often registered among the causes of death as totally independent of the preceding diphtheritic condition.

I have the history of a considerable number of cases in which inflammations of different organs have come on a few weeks after the patient has suffered from a moderately slight throat affection, which has not been recognized as diphtheria, but which has been coincident in point of time and place with true diphtheritic attacks. I have been inclined to look upon the so-called inflammation as having been caused by diphtheritic emboli, and have treated them accordingly. I now advise that course, in the majority of cases in which the inflammatory attack appears to be idiopathic, that is, not preceded by some known chronic diseased state of the suffering part. That treatment has been the use of ammonia as the proper stimulant, so as to reduce the acidity of the blood; for I have generally found these cases in constitutions which are either rheumatic with the lactic acid diathesis, or gouty from the excess of lithic acid in the constitution. I have generally given alkalies, as lithia, or potass in combination with it; and when there has been an elevated temperature, which has indicated excessive chemical action in the invaded part, I have given the sulpho-carbolate of soda with the greatest possible benefit. This salt reduces temperature, most likely by its anti-parasitic power; for, as soon as a few doses have been given, the fever subsides, and the patient is much relieved; but, if the medicine be left off too soon, there is certain to be a relapse. This is very disappointing, and, if the practitioner be disheartened, and try another remedy, his patient will probably die. But if he return to his sulpho-carbolate, he will ultimately destroy all the developing resting spores in the tissues of his patient, and lead him on to a perfect recovery. It is curious how, in these cases, organ after organ becomes involved in the disease; it is also curious, but highly satisfactory, that the congestions or embolisms follow one another in point of time, otherwise there would be very little chance for the patient to recover. I would urge the practitioner to continue the sulpho-carbolate, in small doses, first with the ammonia, and, after a time, with quinine, avoiding altogether the mineral acids, as such appear to allow a more rapid development of the resting spores and a further relapse.

As regards the local treatment of diphtheria, I have been accustomed to treat it on scientific principles, and attack the disease just as my gardener attacks the oidium upon grapes, and other parasitic disease upon vegetables generally. I apply the powder of washed sulphur to the throat very frequently, blowing it into the fauces, and applying it by means of a brush with a little glycerine or honey, alternating the application with a little sulphurous acid in solution. It is not a painful application; it destroys the mycelium and the ordinary spores which produce the disease. If this be done quickly, so that the growths do not penetrate to the deeper tissues, no resting spores will find admission to the body, and there will be no following sequelæ. I have also been accustomed to advise that creosote be kept in the room, so that the air may be placed in that condition which diminishes, if it does not destroy, the growth and development of hyphomycetous fungi.

## THE ELEMENT OF PAIN IN INTESTINAL OBSTRUCTION. By FREDERICK TREVES, F.R.C.S., Assistant Surgeon to and Lecturer on Anatomy at the London Hospital.

In the majority of cases of intestinal obstruction, and in those especially that pursue an acute or sub-acute course, pain is a grave and prominent symptom. It is commonly the first of the long train of troubles that follows an occlusion of the bowel. Of these it is usually one of the longest abiding, one of the most grievous for the patient, and one of the most valuable to the surgeon for diagnostic purposes. On the last-named ground, if on no other, the subject is well worthy of some consideration.

The abdominal pain in cases of intestinal obstruction may be due to at least four conditions: 1. Direct damage to the peritoneum and bowel, as by strangulation. 2. Irregular and disordered peristaltic movements. 3. Distension of the bowel above the obstruction. 4. Inflammatory changes in the intestine and peritoneum.

1. To the first category belongs the pain that depends upon lesion of the peritoneal and intestinal nerves from sudden compression. The condition is illustrated by a loop of bowel strangulated through a slit in the mesentery, or snared by a solitary band or involved in an abrupt and severe volvulus.

The pain due to this condition is, without doubt, the most intense that is met with in intestinal obstruction. It is more severe even than that brought about by sudden perforation of the bowel, since in this latter condition collapse soon appears, and is so soon profound that pain ceases to be the most conspicuous symptom. In many acute cases of intestinal strangulation the initial pain due to the sudden snaring of the bowel is most intense. The patients are described as being in "a state of acute agony," as being "bent double," and in several instances as "rolling upon the floor with pain."

The intensity of the suffering in these cases depends upon many conditions—upon the age and general state of the patient, upon the condition of the sensorium and upon the rapid or tardy appearance of collapse. More precisely, however, it may be said to depend mainly on two things—namely, the abruptness of the strangulation and the extent of peritoneum and intestine involved. The cases in which the most acute suffering appears to have been experienced are those where a large loop or series of loops of intestine have suddenly become engaged and have been subjected to severe compression. It is with special reference to this point that certain distinctions appear in the amount of pain experienced in obstructions of the small intestines as compared with those of the large. Speaking generally, it is almost needless to say that in occlusions of the colon less acute suffering is experienced than is met with in obstruction involving the small intestine. This depends simply upon the fact that cases of acute obstruction are much more common in the lesser bowel and cases of a chronic form in the large. But even when the conditions under which the intestine are engaged are as nearly identical as possible, it will still be found that the pain in obstruction of the small intestine is more severe, or at least is capable of being more severe, than it is when the colon is the part involved.

The small intestine has a more active physiological function than the large; its walls are more vascular; its muscle-layers are better developed; its parietal nerve-plexuses are more considerable. It has, moreover, a larger and more constant peritoneal surface than has the colon; its nerves are derived more directly from the great abdominal nerve centre—the solar plexus—and may on that account be considered to contain more of the spinal nerve filaments sent to the plexus by the splanchnic trunks. The lower part of the colon is supplied by the inferior mesenteric plexus, which is a comparatively distant offshoot from the solar plexus.

The form of obstruction in the large intestine that most closely approaches to an acute strangulation of the lesser bowel, in the matter of the nature and severity of the pain, is a volvulus of the sigmoid flexure. The sigmoid loop is often of considerable length, and has, in any case, as extensive a peritoneal surface as any loop of small intestine of corresponding dimensions. In some forms of volvulus this loop of colon may become acutely strangulated, and the pain experienced be as abrupt, and for a while as intense, as it is in many cases of snaring of a segment of the small intestine by a band. So far, however, as the recorded cases go, the initial pain in volvulus never attains to the severity that is possible in acute strangulation of the lesser bowel; nor does it appear to me to be quite so severe as it would be if a like extent of small intestine were involved in a like form of twist. The point nevertheless remains, that the acuteness of the pain depends not so much upon the state of the individual, nor the nature and locality of the obstruction, as upon the abruptness and completeness of that obstruction and the extent of peritoneum it involves.

One very important point in connection with this initial pain is its position, and the guide it does or does not offer to the situation of the obstruction. Mr. Gay, in speaking of the early symptoms in cases of strangulation by a band, observes that "the localization of the pain is ever at first due to the constricting agent, and marks its seat ("On Intestinal Obstruction by the Solitary Band," London, 1861). This statement, although made by so eminent an authority, I would venture to call in question. I carefully examined the records of fifty cases of acute strangulation of the small intestine in which the clinical details were fully displayed, and in which the site of the obstruction was subsequently demonstrated either by operation or by necropsy. In some of these examples I certainly found that the initial pain was referred to a spot that was shown after death to have corresponded to the site of the occlusion, while in others the pain was complained of at a spot more or less remote from the seat of the strangulation. The proportion of these two sets of cases to one another was one to two. If sensations be localized within the abdominal cavity by the same psychological methods as are presumed to be employed in localizing sensations upon the surface, then it must be confessed that the small intestine at least does not offer the best opportunities for such localization. If a sensation of a painful character be felt upon the surface of the body, it is readily localized by methods that have become automatic but which were founded upon experience. The method involves the unconscious comparison of constant points; it is very largely aided by, and is at first greatly dependent upon sight; it is still more assisted by the function of touch, and a child's first gradual knowledge of the topography of its surface depends largely upon frequently repeated and unconscious experiments. It will be obvious that the small intestine can present few of the conditions most essential for the localization of sensation. The coils of bowel are perpetually changing their position; of these changes, when normally conducted, the mind is not cognizant.

The movements of the intestine, moreover, are of a most complicated character, and the length of the tube is considerable. Even if the anterior abdominal parietes were transparent and the intestines could be seen, some long experience would be demanded before sensations could be localized in the bowel without the aid, in every case, of vision. One would have imagined, therefore, that a sudden lesion to some limited parts of the small intestine would have given rise to pain not only difficult to localize but impossible to localize with certainty. In fixed viscera, such as the stomach and a larger part of the colon, data are afforded for the localization of painful sensations; but even in these parts of the alimentary canal such localization is not always very precise. In actual pain it will be found that the position of the initial pain in acute intestinal obstruction is valueless as a guide to the position of the lesion in the bowel. In making careful observation as to the most usual position of this initial pain I was struck with the frequency with which it is complained of about the umbilicus. It is well known that in strangulated hernia the abdominal pain is very frequently, indeed most frequently, felt about the navel. The patient will often point to one especial point near the umbilicus, where the pain is especially concentrated. Observation would appear to show that such pain is due, not to disordered peristaltic movements, but to the lesion of the bowel and peritoneum.

My impression is that this somewhat peculiar localization indicates a reflection of the pain to the great abdominal nerve centres. The solar plexus is situated on each side of the middle line, from three to four inches above the umbilicus. The superior mesenteric plexus, through which the small intestine is supplied, is nearer to that cicatrix.

I might cite a few cases that are difficult of explanation unless this hypothesis be accepted. In one case the pain was most severe on the right of the umbilicus, just below the liver; the obstruction was in the ileum, eighteen inches from the cæcum. (*Med. Times and Gaz.*, vol. ii., 1876, page 651.) In another the pain was just to the left of the navel; the obstruction was due to the strangulation of a loop of the ileum in a rent in the right broad ligament. (Pathological Society Transactions, vol. xii., p. 103.) In the third example the pain had the same situation as in the last case, while the strangulated loop was found deep in the right iliac fossa. (*Union Méd.*, 1860, p. 97.) In another instance the most acute suffering was over the site of the gall-bladder; the obstruction was found, however, to be low down in the small intestine. (*British Med. Jour.*, vol. 1., 1883, p. 999.) In still another example, where the pain was complained of in the epigastrium, the obstruction was due to a snaring of a loop of the lower bowel by a band passing from the urinary bladder to the lumbar spine. (*Bull. de la Société Anatom.*, Paris, 1843.) It is significant also that in most of the cases where the site of the initial pain has corresponded with the site of the obstruction the pain has been about the umbilicus, and the frequency with which the strangulated loop is found to be about the navel (as in strangulation by the adherent diverticulum) need not be commented upon.

It may be here well to point out that the present form of abdominal pain, as well as that due to disordered peristalsis and distension, is apt to be diffused and to be referred in part to the surface of the body. In severe colic the patient, if asked to indicate the seat of the pain, will commonly pass the hands vaguely over the abdomen, and will complain of much pain in the back and between the shoulders. The explanation of such reflection is as follows: The spinal nerve element in the intestinal plexuses is derived almost entirely through the splanchnic nerves. These nerves, in turn, derive their spinal filaments from the lower six or more of the intercostal nerves. These intercostal trunks happen to be the very nerves that supply almost exclusively the integuments of the front of the abdomen, and their posterior branches go to the middle of the back, including the region between the extremities of the scapulæ. In slight colic the patient sometimes derives relief from friction of the back over the region supplied by these lower intercostal nerves, and the effect of counter-irritation applied to the abdomen in colic depends probably to no small extent upon this nerve arrangement.

The pain now under consideration is essentially a continuous pain, one that is frequently relieved by pressure, and that after rapidly becoming very intense is apt to lessen in severity.

The total cessation of the pain, noted in some instances, usually indicates profound collapse or a state of narcotism or gangrene of the bowels.

2. The suffering in intestinal obstruction that is due to disordered peristaltic movement is usually a conspicuous clinical feature. On the one hand the obstruction offers an obstacle to the passage of the peristaltic wave; on the other, the lesion to the bowel is a starting-point for disordered movements that are the outcome of reflex action. If the obstruction be chronic the bowel above it is hypertrophied, and vigorous movements in this over-developed segment hurl themselves against the obstruction.

If an extensive loop of small intestine be involved in a strangulation, there is no doubt that that loop is itself the seat of violent movements, which may almost be viewed in the light of a frantic struggle in the bowel to be free. Experiment has shown that a diminution in the oxygen of the blood going to the intestine, and an increase in its carbonic acid, induce inordinate peristaltic movements, and that such movements are also induced by mechanical irritation of the serous coat of the bowel. In strangulation these conditions are present, and much of the severe colicky pain noted early in strangulation of a large loop of small intestine is probably due to movements in the involved coil itself rather than in the bowel above it.

The pain depending upon disordered peristalsis is more severe in cases in which the small intestine is involved, owing to the greater muscular development of that part of the bowel as compared with the colon, and on account also of the greater activity of the small intestine and its superior nerve supply. Other things being equal, it is, perhaps, on the whole, more severe in examples of chronic obstruction than in those of an acute character. In the chronic forms the gut above the stenosis has become greatly hypertrophied; its walls are probably congested, possibly inflamed, and ulceration of the mucous membrane is more often present than absent. This is the form of pain that is induced by the taking of food, and often by the administration of enemata. I have met with some recorded cases of obstruction in the small intestine where severe colic was brought on by a digital examination of the rectum. In such examples one has to deal merely with peristalsis due to reflex action.

Pain due to disordered peristaltic movements, as met with in a case of simple colic, is essentially of an intermittent or paroxysmal character. In examples of obstruction this feature may not be so marked. There are other causes producing pain, and the actual suffering experienced by the patient is to be regarded as the resultant of several forms of painful sensation.

In the diagnosis, however, of intestinal obstruction, I would point out that a very important distinction may be observed with reference to the character of the pain. When the obstruction in the bowel is complete, the pain experienced is constant, with periodic exacerbations. When the obstruction is incomplete, the pain is intermittent, and there are intervals of freedom from pain, of varying duration. Thus in acute strangulation of the intestine the suffering is continuous; the patient is never free from pain, although he has from time to time an increase in that pain. In stricture, on the other hand—taking as an example stricture of the small intestine—the pain is intermittent. At the commencement of the case the patient has only an occasional attack of pain. He may be entirely free from suffering for days, and even weeks. Now, as the obstruction advances, the painful attacks are of longer duration, while the intervals of freedom diminish. Finally, if the occlusion becomes complete, the pain becomes continuous, with periodic exacerbations. In intussusception, again, the suffering complained of has at first an intermittent character, for the lumen of the bowel is only partly occluded. When, however, that occlusion is complete, the pain becomes continuous, with exacerbations. Out of fifty examples of strangulation by bands in which the occlusion was presumed to be complete, I find only eight instances of intermittent pain. In several of these exceptions, however, which are fully detailed in my Jacksonian prize essay—there were peculiar circumstances that may have modified the nature of the pain.

With the pain that depends upon disordered peritalsis there is associated at times some tenderness. This tenderness may depend upon changes in the intestine, or may be of the same kind as that experienced after cramp in the intestinal muscles.

3 and 4. With regard to the pain due to distension and to inflammatory changes, space will not permit me to deal save in the briefest manner. The pain from distension is continuous and is very diffused. It is associated with tenderness on pressure, which may, however, be quite insignificant. It is more marked in cases of obstruction of the colon than in light cases in the small intestine. The most severe degree of distention, and that most rapidly developed, is met with in acute volvulus of the sigmoid flexure. In several of the reported cases of this variety of occlusion the diaphragm has been pushed up by the distended intestine, the heart has been much displaced, the functions of the thoracic viscera have been seriously interfered with, and the involved loop of bowel has become rapidly gangrenous as a result of the distention. It is needless to point out that the degree of the distention depends upon many conditions—upon the site and completeness of the obstruction, upon the extent of the vomiting, upon the nature of the intestinal contents, and upon the association with peritonitis. In the pain due to inflammatory changes in the bowel or peritoneum there is, as a feature almost more conspicuous than the pain, a marked degree of tenderness. When the morbid changes are still limited in extent this tenderness is localized, and the system has considerable diagnostic value. In connection with this point it must be borne in mind that the only

peritonitis found in a case of fatal obstruction may be at some distance from the occlusion itself. For example, in a case of stricture of the sigmoid flexure, the distension of the colon above the stenosis will probably be most felt at the caput coli. The mucous membrane of the cæcum may become ulcerated, the walls of the bowel may inflame, and a local peritonitis be induced that is separated from the seat of actual disease by the length of the large intestine. In all cases the pain and the tenderness tend in time to become diffused over the whole of the abdomen.—*Brit. Med. Jour.*

IRRITATION OF THE SEXUAL APPARATUS AS AN ETIOLOGICAL FACTOR IN THE PRODUCTION OF NASAL DISEASE.—The evil effects of undue excitation or disease of the generative apparatus upon the organs of sight, and hearing are well known to specialists in these departments. In a very learned and interesting article in the April number of the *American Journal of the Medical Sciences,* Dr. John N. Mackenzie quotes authorities to prove that the fact that immoderate indulgence in venery may lead to derangements of sight, was familiar to Aristotle, and that the fathers of medicine recognized some mysterious connection between the ear and the productive functions, and that the intimate relationship between the genital organs and those of the throat and neck attracted the special attention of the ancients.

Whilst historical facts point to the early recognition of the relationship between the over-indulgence of the sexual powers and morbid conditions of the eye, ear and throat, the special part which it plays in the production of nasal disease seems to have been overlooked, and Dr. Mackenzie has done good work in pointing out the intimate physiological relationship which exists between certain portions of the reproductive system and the erectile nasal tissue. Clinical observation has shown him that—

1. In a fair proportion of women suffering from nasal affections, the disease is greatly aggravated during the menstrual epoch, or when under the influence of sexual excitement.
2. Excessive indulgence in venery seems to have a tendency to initiate inflammation of the nasal mucous membrane, or to aggravate existing disease of the structure.
3. The same is true in regard to the confirmed habit of masturbation.
4. The co-existence of uterine or ovarian disease exerts sometimes an important influence on the clinical history of nasal inflammation.

These observations, therefore, encourage the belief, if they do not establish the fact, that the natural stimulation of the reproductive apparatus, as in coitus, menstruation, etc., when carried beyond its normal physiological bounds, or pathological states of the sexual apparatus, as in certain diseased conditions, or as the result of their over-stimulation from venereal excess, masturbation, etc., are often the predisposing and occasionally the exciting causes of nasal congestion and inflammation. Whether it occurs through reflex action, pure and simple, or as the sequel of an excitation in which several or all of the erectile structures of the body participate, the starting-point of nasal disease is, in all probability, the repeated stimulation and congestion of the turbinated erectile tissue of the nose.—*Age.*

Mammary Abscess.—No doubt great good has come from the recent spirited discussion of puerperal fever by the profession of New York, and every other city in the United States having a medical society. The old and the young have alike had a chance to compare their facts and theories concerning a disease that has from the earliest time been the *bete noir* of the medical practitioner. This disease having been so thoroughly discussed, we would suggest that Drs. Thomas and Barker now agitate the subject of mastitis, and tell us when and how to anticipate or prevent the sufferings which nursing women endure. Perhaps these gentlemen, like many others, think this subject is too easy and simple to receive great attention. Any doctor ought to know enough to prevent or successfully manage a "gathered breast," to tell the nursing woman that she must keep the breast thoroughly emptied of milk, and thereby prevent the engorgement of ducts and gland cells which precedes the development of inflammation, or to poultice and incise when abscess has formed. A great deal of suffering might be relieved if these great lights of the profession would tell us how they succeed in preventing mastitis, if, perchance, they do succeed better than the rank and file. When an old practitioner of thirty or forty years experience, and of more than average professional attainment, treats a woman through her confinement and three or four days thereafter, has his attention called to pain in the breast and orders his test treatment, and sees it carried out, and yet the gland goes on to suppuration and gangrenous sloughing, and the poor woman is finally saved after a six weeks' struggle with septicæmia, the ordinary physician is apt to feel a little sceptic about the efficacy of preventive treatment, or the success of any management which proposes to carry the cases through without serious systemic shock. A journal article on mastitis usually expends its force in extolling the success the writer has had by the use of some special formula containing belladonna or phytolacca. Another writer always cures with cold and another with heat—thus imitating Gil Blas, who says that heat and cold are the only remedies for the diseases of mankind; if one fails the other will succeed. One fact is quite apparent: physicians too often leave the care of the disease of the nursing breast to the nurse. Probably not more than one-half of the cases occurring receive the attention of the physician from the start. Thus from sheer want of experience many dismal failures ensue.

The situation as regards broken breasts may be summarized thus: 1. The doctor is often not called until thirty-six or forty-eight hours after inflammatory trouble has commenced. 2. He does not know what to do after he is called. 3. He poultices the breast too much, all treatment being local and not affecting materially anything but the skin. Now, if this were different, and the doctor inquired after the breast three or four days after delivery, and the moment the patient complained of soreness about the nipples order a shield and tube for the infant, and at once apply adhesive plasters in such a way as to relieve the gland from the tension of its own weight, inflammation and suppuration might be prevented. If, however, the soreness has existed three or four days, and the patient has chilly sensations along her back, and there are hard, painful lumps in the glands, he may accomplish good by resorting to the afore-mentioned methods, and, in addition, thrusting a very sharp, straight bistoury into and through the indurated lumps. If pus is found, the incision may be enlarged to admit good drainage as the bistoury is withdrawn; if not, the resulting hæmorrhage will generally relieve the vascular engorgement. The bowels should be opened by a saline, preceded by a mild mercurial, say 10 grains of calomel, in two doses, three hours apart. Opium should then be given for the same reason that it is given in other inflammatory affections. When suppuration has occurred before the doctor is called, free incision of the abscess should be performed, and the wound dressed with absorbent cotton, moistened with a solution of corrosive sublimate, one grain to the pint of water. It is better to make free openings with the knife than to annoy the patient by deluging putrefying abscesses with antiseptic solutions. The daily use of a syringe for this purpose irritates the patient more than a good free cut made but once.

The aim should be to give the gland as much physiological rest as possible, and while belladonna may be able to arrest grandular activity in a physiological sense, practically it can do nothing of the kind while the baby is tugging at the other breast, or while the maternal impulses are encouraging the gland-cells to make the most of the blood that is being supplied to them. It is better to look at the matter as it is, and not be satisfied with treatment which is theoretically sound, but has been found in practice of no use. The firm and uniform pressure imposed by properly applied adhesive plasters does more to accomplish physiological rest for the mammary gland than any drug that has heretofore been employed.—*Age.*

Treatment of Acute Abcess.—Prof. Smith, of the University of New York, has recently published in the *Æsculapian* his treatment of acute abcess, for which he claims in the case reported a saving of at least a month to the patient. He advises a similar procedure in carbuncles and furuncles; in fact, wherever there is necrosed tissue. The method is as follows:

1. Wash well with soap and water and a flesh brush the skin at the seat of operation, then douche with a solution of corrosive sublimate 1 to 500.
2. Open the abcess with a knife treated with a solution of carbolic acid 1 to 30, the opening to be of a size to admit the nozzle of a Davidson syringe.
3. Force out the contained pus by pressure: when it ceases to flow, introduce the nozzle of the syringe, well disinfected, the edges of the wound being held firmly around it, and distend the cavity to its fullest capacity with corrosive sublimate solution 1 to 5,000.
4. Force out the injected fluid by pressure.
5. Repeat this injection as often as may be necessary until the water flows away quite undiscolored.
6. Lay the cavity open to its full extent, keeping up irrigation with a corrosive sublimate solution 1 to 2,000.
7. Cut away all shreds of tissue, and scrape off gently any granulations that

may be upon the living surface of the abcess by means of a curette, until a perfectly clean surface is everywhere apparent.

8. Ligature any small vessels that may be bleeding with carbolized ligatures, thorough irrigation being kept up with the corrosive sublimate solution throughout.

9. Close the wound with an uninterrupted suture, except at the most dependent point, where a small opening must be left for drainage.

10. Over the drainage opening place a disinfected sponge to absorb discharge.

11. Sprinkle the external wound and adjacent skin with iodoform; cover the wound well with folds of gauze between which iodoform is well sprinkled; over the layers of gauze apply a dressing of borated cotton, and if in a limb, secure all by a light plaster-of-Paris bandage. In the case reported, that of a man with abcess in the thigh, the result of injury, and large enough to contain a pint, and to get at which an incision two inches deep had to be made, the suffering and fever before the operation was considerable. Temperature 103° F. The day after the operation the temperature fell to normal, and did not again rise to 100°; the pain ceased entirely, the appetite returned, and he enjoyed sound and undisturbed sleep. The patient stated that from his recovery from the anæsthetic he had felt entirely well. The dressing was removed on the eighth day. The wound was entirely closed, and though there was some thickening of the tissues involved in the injury there was no tenderness. He could walk without pain or inconvenience, and there was a rapid subsidence of the swelling of the part.—*Boston Medical and Surgical Journal.*

Medical Flunkeyism in England.—Some two or three years ago our English exchanges were filled with a discussion of the social status of the English medical profession. There is not the least question touching the relation which the profession bears to the "nobility" or "titled gentry." Its inferiority in social matters is too determinate to admit of question, and the only dispute in the discussion referred to was confined to arguments supporting and repudiating the assertion made by a prominent member of the profession, that the medical practitioner's social status was markedly lower, not only than that of the members of any of the other learned professions, but also than that of "tradespeople." The discussion was a fruitless one, and we were left in a more painful state of uncertainty on the matter than if it had never been referred to, and we shall probably never know exactly whether the wife of Dr. Jones and himself and family are, because of the fact that he doctors for a living, excluded from the circles in which those who are the appendages of the men who sell haberdashery, and dispense legal opinions and gospel solace for a livelihood, move about with the air and grace of those who are to the manor born. While it would have been exceedingly satisfactory to have had this momentous question of whether the wives of Sergeant Buzfuz and the Rev. Dotheboys have any right to elevate the tips of their dear noses, should they happen to meet the wife of Dr. Bob Sawyer (if Dr. Bob ever got a wife) in their "circle," we must be content with the uncertainty.

The discussion referred to appeared exceedingly ludicrous at this distance, and under a regime under which social qualifications are not affected by the individual's occupation, provided such occupation be honorable and legitimate. Despite the fact that men whom the profession even on this side of the Atlantic delight to honor took part in it, it was supposed to be one of those out-croppings of the puerility with which men are all too apt to be affected. Latterly, however, a discussion in our English exchanges of the manner in which the physician should deport himself in his relation to different classes of patients, forces the conviction that flunkeyism has not yet been eliminated from the English profession. "A practitioner of fifty-one year's standing," for instance, gives an exhibition of it in the *Medical Times* recently, which is all the more nauseating because of its author's years. He commences by describing how the practitioner should announce himself in a "good neighborhood." He will find in such neighborhoods two bells and a knocker on each house. One bell is marked "visitors" and the other "servants." Which of these should the physician choose?

"My own practice," he says, "has been to ring the visitors' bell gently, though even that, when calling to see one of the servants, has seemed to me to savor of impropriety. But whatever course the young doctor may choose, let him, above all things, beware of using the knocker. That would imply a familiarity with the family, the very suspicion of which it behooves the circumspect practitioner to avoid. So long as he confines his manipulations to the bell-handle he is safe. The next problem that confronts him is, what to do with his hat. Following the custom of other men who have business in the house, he should by rights leave it in the hall, not on the floor, but on the hall table. This course, however, may involve him in serious danger. If there are children about the house, they may be counted upon to play with it, perhaps to march into the drawing-room with it on their heads—a complication which, I need hardly say, as being evidence of undue familiarity, would be of the gravest import. My own plan has always been to take my hat with me, and only to relinquish it when the clinical investigation of a case rendered such a course absolutely necessary. Familiarity is impossible so long as the hand keeps touch of the beaver. It is an almost impregnable rampart, and would take the sting out of anything that tale-bearing domestics might say hereafter. The ethics and etiquette of hand-shaking form a most difficult subject. As a rule, I agree with the *Lancet* that it is best to avoid it. If a lady of title offers two jewelled fingers, the young practitioner would be at once foolish and rude to decline to take them, but the touch should be cold and momentary. With the wives of commoners it will be best, if it can be done without obvious rudeness, to bow formally, instead of offering to shake hands, both on entering and leaving."

Is it any wonder that a profession, whose members can write and whose journals can print such stuff as this, should be regarded by gentlemen with a contempt incompatible with social equality? In America the physician is the peer of any man, and this is because he is equal to any and feels his equality. When he shall be guilty of such flunkeyism as is displayed in the article from which we have above quoted, he shall richly merit the social degradation which the growlers in the English profession declare is the condition of his brethren in England.

Pasteur's Opinion on Cholera.—Pasteur's opinion on cholera in a letter to the *Figaro* (*St. Louis Medical and Surgical Journal*) : "All prophylactic measures proposed by Dr. Koch in Marseilles and Toulon have been known ever since it had been demonstrated that cholera is principally transmitted by cholera dejections. Dr. Koch condemns street-sprinkling or the flow of waters in the gutters, for humidity is favorable to the propagation of the epidemic. This is not my view. In the dust of the streets, in chambers or in dry dirty clothes there are choleraic microbes ; if these microbes are dried to the loss of vitality, all subsequent wetting will not restore life. If, on the contrary, desiccation was such that humidity might favor the return to life, it is yet well that they be kept moist, as being less susceptible of being wafted by the wind in every direction. If they are left in the state of relative dryness, which has not killed them, the least breeze might bring them in contact with our mucous membrane, where they would find the humidity necessary for their existence. Who would be willing to sleep or to eat in a room where persons have died of cholera, and where soiled garments and bedclothes have been left in a desiccated state ? Dr. Koch advised that dejections on the floor of a sick room should be wiped and rubbed with dry rags and burned. This is impracticable ; furniture and floors cannot be thoroughly cleansed with dry cloths, still less dirty cloths. Burning up of the rags is objectionable, for tinders or imperfectly burned particles become detached and float about in the room. Plunging in boiling carbolized water is decidedly preferable. Vacating and airing a room six days is also insufficient."

Tracheotomy Without a Tube.—The danger and inconvenience connected with the tracheotomy tube *per se* are sufficiently great to have aroused a desire for some device which would obviate them. The matter was the subject of discussion before a late meeting of the Philadelphia Academy of Medicine. Dr. J. B. Roberts said he had had so much difficulty in keeping the tube clear that he had discarded it entirely, and instead cut out a rectangular piece of the trachea, and stitched the edge of the opening to the skin. He found this to answer better than the double canula, which is liable to become choked with secretion. Dr. Packard had operated in this manner, but feared to adopt it as a general rule lest constriction of the trachea occur through cicatrization of the opening on healing. He instanced one case in which this had occurred. He thought the testimony in favor of tracheotomy without a tube was, however, very strong. Dr. J. H. Brinton recalled two cases in which the tube had been dispensed with. The membrane was readily ejected, and there was far less trouble than from the tube. Both cases, however, died from the diphtheritic infection. Dr. Nancrede regarded the danger from ulceration from the irritation of the tube as sufficiently great to warrant the adoption of such a substitute for it as had been suggested, and the sentiment of the meeting was in favor of according a trial to the method of performing tracheotomy which should dispense with the canula. —*Med. Age.*

# PROCEEDINGS OF SOCIETIES.

[NOTE.—The weekly medical journals very properly publish the proceedings of societies as soon as the societies adjourn. This journal being a monthly cannot, of course, do this; it will publish, therefore, only such carefully obtained proceedings of American and European Societies as are most interesting and instructive.—ED.]

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## NEW YORK ACADEMY OF MEDICINE. Valedictory Address delivered by the retiring President, FORDYCE BARKER, M.D., LL.D. Edin., February 5th, 1885.

FELLOWS OF THE ACADEMY: In now closing my official relations with the Academy, it is both a pleasure and a duty to briefly recall the more prominent features in its history during the period of this connection. I will also venture to offer a few suggestions derived from my long experience in this position, as to some points relating to its future growth, its increasing usefulness and its influence on the profession. As I know you will be impatient for the intellectual feast which is to follow in the address of my successor to this Chair, I shall be as brief as is consistent with a clear statement of the points to which I think it desirable to ask your attention.

It has been my good fortune to hold this position when the profession was becoming more alive to the importance of this institution, and more and more ready to contribute material aid for its growth and support; at the same time, there was a new development of mental activity in the profession, not only in this city, but all over the world, as demonstrated by great and important discoveries in science, and a wonderful increase and valuable additions to medical literature.

As I have alluded to these facts more in detail in former addresses before the Academy, I will not detain you now by further allusions to them. I will only briefly refer to a few of the most notable events connected with the Academy during my administration.

First to be mentioned is this new and commodious hall, which could not then have been built except for the munificent donation of one noble benefactor, Dr. Abram Dubois, and the contribution to the full extent of their hard-earned means by many others. We are rapidly out-growing our new hall, and must soon have another, as our library is now nearly filled. As I learn from Mr. Browne, our excellent assistant librarian, the Academy had, when this hall was built in 1879, about 9,000 volumes; it now has about 35,000 volumes and 15,000 pamphlets. Its circulating department has about 6,000 volumes, which our fellows can take out of the library for consultation at home. In our journal room, open, as is the library, for all who may wish to read in our rooms, there are 225 medical journals in all languages in which there is to be found a medical literature.

The Academy is greatly indebted to Messrs. Wm. Wood & Co. and D. Appleton & Co. for large donations of their new publications, and, I believe, to some foreign and other American medical publishers. We gratefully acknowledge the generosity of these gifts, and we feel assured that they were made from entirely generous motives. But we may be permitted to express the conviction that both publishers and authors will find it a wise business policy to place a copy of every new medical work in our library; as it has been estimated by a competent authority that one copy of every new good book in this library will secure the sale of at least ten more. The library is visited not only by the profession of this city, but by medical men from all parts of the country who come to this great metropolis. They have seen in some medical journal a notice of a book, but have not remembered who were the publishers; in coming to our library, they examine it to see if it is what they want.

The next notable event in the history of our Academy, since I have held this position, is its absorption of another very important organization, the Journal Association, which, to quote from a former address, "not only added largely to our library, but also to our moral and intellectual power."

The truth of history demands that the fact should be mentioned that nearly two years ago the Academy passed through the segment of a cyclone, but like a good steamship, driven over a sand bank near a lee shore, with its engines temporarily disabled, it escaped being hogged, its seams were not opened; its barnacles have been scraped off, its bottom has been cleaned, and it has since gone on its voyage with favoring winds and fine weather. All who are familiar with its past history, and who are unbiased by personal feeling and prejudice, must agree that the Academy has more nearly approached its avowed aims and its high purposes during the past year than in any former one since it was founded. It has had a larger increase of prominent men, and of young men of promise, than in any previous year since that in which it was organized, with the exception of the year when the Journal Association came into it. More than four times as many papers have been offered to me than there have been sessions to listen to them, as these sessions had been promised to previous applicants months before. Very many of these papers have been withdrawn, and I have afterwards seen them not only in the medical journals of this city, but in the journals of Philadelphia and Boston. It is bare justice for me to add that I have generally found them to be of such merit that I greatly regretted the Academy could not have had the credit of their first publication.

The papers which have been read at our meetings have been characterized by careful preparation, thorough research, original and often valuable hints as to pathological explanations and therapeutical indications.

Our discussions have been of such excellence that I am quite certain that every one carries away from our meetings either new suggestions or new information, which amply compensate for the evening passed in this hall.

In a scientific body like this, all discussions should express the results of mature inquiry, and a clear and forcible statement of the reasons which have led to positive practice. In some papers the novelty of opinions advocated and the original methods of practice proposed, whether medical or surgical, may be so exclusively a matter of individual experience that all discussion must be necessarily limited at first to inquiries and *a priori* objections, founded on anatomical, physiological or pathological grounds. Papers of this class should be the subject of a most thorough and searching examination; for they may be either mischievous, and their effect for evil must be effectually exposed, or they may possess positive value, which should lead to prompt acceptance and adoption.

To secure such discussion as will represent the most advanced knowledge of the Academy on any special topic, I have at our recent meetings adopted a plan first introduced by Dr. V. P. Gibney. Writers of papers have been requested to send to a few of those whom they knew to have given special attention to his subject the points which it would suggest for discussion, printed on a small slip of paper, and especially asking those who held different or opposing views. They thus have time to arrange and formulate their knowledge and opinions, and the time of those present at the meeting is not wearily wasted in listening to crude, profitless and digressive talk.

The reports of the treasurers of the Academy and of the Board of Trustees have already been before the Academy. While its financial condition is now better than ever before, there still remains much to do. A few weeks since a Committee of Ways and Means were appointed, of which Dr. Gouveneur M. Smith is the Chairman, to solicit contributions to pay off our only debt, a mortgage of five thousand dollars. They have worked with great zeal and enthusiasm; the fellows of the Academy have responded with self-sacrificing generosity; the necessary sum has not yet been wholly secured, but the prospect of soon accomplishing this is most encouraging. We particularly need money for preserving our library by bookbinding. It will be remembered that last year a generous sum was given for this purpose by a lady, who has in many instances shown that she is as warm a friend to the Academy as she is conspicuous for her readiness to aid every good work by munificent support. Many of our fellows have also most liberally added to the beauty of the library in this way, and have rendered great service in the preservation of our books in good condition, which otherwise would speedily deteriorate.

I have long contemplated offering some suggestions on the present occasion as to the wisdom of a change in our by-laws relative to the duties and functions of the sections. Only one of the sections, that of Obstetrics and Diseases of Women, has kept up an active organization, done excellent work and made regular reports to the Academy since my official connection with it. Two or three only of the other sections have reported their organization by the election of a chairman and a secretary, and this has been all. Two have appointed a fellow to read an original paper before the Academy, one of which, a most valuable paper, was read before us. The other I have never been able to get, and as four years have now passed since that time, I do not think it very probable that it ever will come before the Academy.

The founders of the Academy did not contemplate making these sections independent societies for special work, but as contributing aids to the high aims of the central power. I had proposed to suggest such a modification of Article XVII., Section 2, as would assign to the sections functions similar to those of the Academy of Medicine at Paris. But we have not the time now to consider the details of such a change, and I leave the matter for future consideration by the Academy and my honored successor.

Neither did the founders of the Academy intend it to absorb or concentrate in itself all the scientific work of the profession in this city. The whole spirit of its high aims and purposes indicates that, on the contrary, they desired to stimulate and encourage such work in every feasible direction. I hope the time is not far distant when the Academy will be so well endowed that it may offer to all such societies as the New York County Medical Society, the Pathological, the Obstetric and the Surgical Societies, and the youngest of all, which has begun its career with excellent scientific work, the New York County Medical Association, a home for its meetings free from all expense.

Our standing committees have always faithfully discharged their important duties, with one exception, and that is the Committee on Medical Education, which has had little to do, and it has just done this and nothing more.

I may now be permitted to ask if the time has not come, when it should be one of the most important and useful of all of our standing committees, in carrying out one of the objects of the Academy as declared in our constitution—" the elevation of the standard of medical education ? " The question is how this can best be effected.

It seems to me that a way is now open for this committee to do effective work in this direction.

For years some of the medical profession in all parts of the country have been agitating the question of separating the licensing power to practice medicine from the teaching power.

It is a subject of great importance to the profession, to our medical schools and equally so to the community. It must be met and settled in a way that will be most effective for good, but this cannot be done at once. There are two ways by which this can be accomplished, but each would require time.

One way involves the division of the profession into contending parties, each most zealous to carry its point ; heated controversies, which always provoke personal feeling and personal antagonism ; an appeal for action of societies, and a struggle for majority votes, not only in medical societies, but in securing legislative action—all of which would undoubtedly affect injuriously our medical colleges and lower the profession in the estimation of the public. Any good secured would be at a great and unnecessary cost. The public cannot understand medical controversies except from what appears on the surface. A " doctors' quarrel " seems to the non-medical community like a fight between drunken men in the dark. The late Mr. Charles Dickens once related to me a story which he had heard of how Sidney Smith convulsed with laughter a dinner company at the Holland house, by his description of a duel between two doctors. The mode of warfare was croton oil on the tips of their fingers, trying to rub each other's lips.

Now, this question is one which belongs to the domain of reason, and let us hope, for the honor of the profession, that hereafter it will be confined to the region of argument, and that in due time it will be settled to the satisfaction of all who are actuated by pure motives and a desire to secure the best results. At the last meeting of the Academy some resolutions were offered, but by the courteous consent of my friends, the mover and seconder of the resolutions, they were laid on the table for future consideration, I therefore feel that I have now the floor, and venture to throw out a few suggestions as to the other method of meeting this question.

In order that the standpoint from which I look at this subject may be perfectly understood, I will briefly state a few propositions which seem to me common ground, upon which we all stand and from which we must start.

Where charters for medical colleges can be easily obtained from State legislatures, it is a duty which the profession owes to the public as well as to itself to protect the community from ignorant, unprincipled practitioners of medicine, who not only swindle their victims, but jeopardize health and often sacrifice human life.

This is a matter of great difficulty where each State is an independent sovereignty as to all such laws, where there is no central power to control action, and where personal freedom of opinion and conduct is zealously guarded as to everything which does not interfere with the right of others as regards health and property.

The interests of the medical profession are so closely allied with the medical colleges that what affects detrimentally the one must reciprocally injure the other.

The profession has a perfect right to supervise the methods and exercise a controlling influence over those who by law are permitted the privilege of giving a diploma, which is effectually a license to practice medicine.

All wise legislation must be based on a thorough knowledge of all the conditions which demand special law ; it cannot be evolved from the inner consciousness of any one who has only the spirit, the zeal and the genius of reform, but must be derived from the accumulated wisdom and experience of the past.

Mere examinations by a special Board, who have had no previous training in this direction, no personal acquaintance with the mental characteristics, the habits of study or the personal conduct of the candidate, would be as unsafe a test for admission to the profession as any objection that can be urged against the present system. Injustice would be done to some, while flippant readiness in reply, which can be easily attained by a quick, bright mind by a few weeks of cramming, without either solid requirement or sound judgment, would always secure success.

The experience of all countries has demonstrated the wisdom and necessity of examination by, and the assent of the teaching Faculties.

But in all other countries except this there is an additional protection to the profession and the public by the concurrence of another power.

In the Edinburgh University, and in some other medical institutions of Great Britain, this is vested in a special Board of Examiners. In France this is under the direct control of the Government. The Minister of Public Instruction has not only the power of granting or withholding the diploma, but, in addition, even in this so-called Republican Government, he has the power of retiring any professor whose teaching is not abreast of the times. In Germany, also, while the methods vary in different universities and in different constituted parts of the empire, it is yet under Government control, which, I believe, is always exercised wisely.

Now, I offer the suggestion that a committee of judicious, wise and unprejudiced medical men, which would represent the best interests of the profession, the medical colleges and the public, could frame a law, with the aid of competent legal advisers, which would combine the two methods, in accordance with the spirit of our Republican institutions and the sentiments of our epoch, and thus save the profession from unfortunate and heated controversies, and from crude, hasty and ever-changing legislation.

Would not the demands of the most progressive members of the profession be satisfied if the regents of the University were empowered by law to appoint the Committee on Education of the Academy of Medicine a supervisory Board of Examiners for the medical colleges of this city, whose duty should be to make an annual report, not only as to the examination for diplomas, but other details as to the instruction and education of the student. This committee should be enlarged to the number of the principal departments of instruction, and should serve without pay, for there can be no doubt that the best men in the profession, who have the time, would esteem it a high honor to serve on such a committee.

For the medical colleges in other parts of the State there would be no difficulty in devising a method by which the regents would appoint men for the Board of Supervisory Examiners who would be most satisfactory to all.

None except those who are well acquainted with the facts can appreciate the immense advance which the medical colleges of this city have made within the past quarter of a century in teaching, and the increased facilities for acquiring a thorough education in all departments.

I have also great pleasure in referring to two other schools—the Polyclinic and the Post-Graduate Medical School and Hospital—which have been doing great work for the more thorough medical education of those who have diplomas, and thus necessarily for the " elevation of the profession," within the past three years. I do not believe that one in fifty of the profession in this city have the least conception of what these schools are doing. If I expressed in moderate terms my estimation of the importance and value of their work to the profession of the country, I should be regarded by many as either carried away by my enthusiasm or prompted by personal considerations, so I will only say: "Go and see for yourselves." Medical men who come to this city, and who always keep up their professional interest, should not fail to visit and see what clinical teaching and clinical opportunities are found here, with all the equipments for their utilization, and they will be well repaid for the time given up for this purpose. This system of special clinical improvement originated in Germany, and nine or ten years ago I seized an opportunity to visit the most prominent of the polyclinics in that country. Undoubtedly they have greatly advanced within this time, but I assert that then none that I visited were either in clinical advantages or clinical teaching on a level with our own at the present time.

I take the liberty of suggesting that it would be a wise and politic move for the medical colleges of this city, the New York Polyclinic and the New York Post-Graduate Medical School and Hospital, to take the initiative and invite the Committee on Medical Education of the Academy of Medicine to visit these institutions, study their methods and their equipments, and report the result of their observations to the Academy at its annual meeting in January, 1886.

It must be obvious to all that this great improvement in medical education, far beyond the elementary teaching of former times, implies a corresponding elevation, not merely in the level of the average of the professsion, but a still greater growth in the higher standards of medical science and literature.

Thus the inquiry is naturally suggested, What is the future of this Academy, what is to be expected from it, and how is it to be placed on the high plane where it should stand in reference to the profession, not only of this city and of this country, but of the world? A wise forecast will early plan to secure a result which it desires to attain.

While our educational institutions are steadily improving their facilities for training the young men who are about to begin their career, and our polyclinics and post-graduate schools are more thoroughly preparing them for the higher grades of the profession, such an organization as our Academy of Medicine, in the great metropolis of the country, should be an ultimate centre at which all those who have been long enough at work to find out their individual vocation should have every opportunity to carefully study all the literature of past ages, and make original investigations in every possible field of medical science which can add to its importance. All short of this will be just so far a failure of the true mission of the Academy.

Thus far, which is only a beginning, the Academy has done its duty in bringing together most of the best men of the profession and making them acquainted with the special ability of each, in collecting a most creditable library for consultation, research and circulation, and in stimulating and bringing out good literary scientific work.

What the Academy requires in the future is: First, a large fire-proof building, with ample room for a library containing all the medical literature of past and coming times, and including: second, a large hall for its meetings, and others for smaller societies and committees; third, a large room for a museum, illustrating physiological and pathological anthropology, and which should include a craniological series, a pathological series and a series of sections and dissections, illustrating topographical human anatomy and a comparative anatomy series; fourth, an anthropometric laboratory, provided with the best means of measuring human bodies, the faculties, and everything cognate to these subjects, and which should include a set of psychometrical instruments and everything pertaining to the series; fifth, a lecture hall, connecting with the laboratory and fully equipped with apparatus for lectures and demonstrations of all kinds; sixth, it should also have a thoroughly educated and trained pathologist, who should, by means of an adequate salary paid by the Academy, be able to superintend all the scientific work and report all the specimens furnished to him; and also a first class mechanic, skilled in brass and glass work, and a good practical phonographer.

This is a broad scheme, which will require a very large endowment, but it is my firm conviction that it only outlines the future of the Academy, even if it demands a million of dollars.

The liberality of New York is as boundless as its wealth when convinced of the worthiness of its object. But large wealth is subjected to perpetual annoyance from solicitations, and to criticism from those who have some pet end to promote, which they deem the most important above all others. This kind of discipline trains wealth to the exercise of discrimination and judgment, and, besides, it has its own convictions as to how its surplus can best be employed.

The position of the possessors or representatives of great wealth in this country is peculiar and anomalous, and the thinking men of this class, and there are many, perfectly comprehend this.

There is no reason to suppose that there will be any exception in this country to the general experience of the world in the past, which is that those who have but little or no property will greatly outnumber those of large wealth. Here lies the peculiarity and anomaly of wealth with us. Heretofore, property has protected itself through its representatives by monopolizing or controlling the law-making and the law-administering power. With us the condition of affairs, if not actually reversed, has certainly been brought within the possibility, if not the calamity, of absolute reversal; inasmuch as, through universal suffrage, untrammeled by conditions of property, and absolutely (in theory at least) free elections, the control of all law-making bodies and the appointment of all law administrations have come to be possible with those "who have not" rather than "to those who have."

Property or its representatives, and more especially the representatives of very large wealth, are therefore exposed to dangers in the future with us, through arbitrary or destructive legislation, which have not existed or do not now exist anywhere else. The possessors of great wealth, by virtue of their superior education and knowledge of the use of methods, may be able to guard themselves in the future, as they have in the past, but this will turn on the fact whether the great majority of such have the clear perception of the future and the sagacity to avail themselves of the two strictly legitimate methods for protection open for adoption.

The first is to bring to the masses, in whom all political power rests, a full realization of the fact that nothing so undermines the property of a state, or so quickly impoverishes the people, through the arrest of industrial growth, as the impairment of the rights of property.

The second is the demonstration by the possessors of wealth, by liberal contributions to every object that can benefit humanity, relieve suffering, prolong and preserve human life, improve education, aid scientific investigation and promote a higher development of art, that it is a greater boon to the masses than it is possible to secure by any other means, as the past history of the world illustrates.

We have abundant proof that this view has been adopted by many in this city.

The foundation of the Astor Library and the Cooper Institute are a corroboration of this statement as regards the past. The splendid gift to the College of Physicians and Surgeons by Mr. W. H. Vanderbilt, the munificent endowment of the New York Cancer Hospital by Mr. John Jacob Astor, and the generous and liberal contribution of Mr. Andrew Carnegie for a pathological laboratory in the Bellevue Hospital Medical College are recent evidences of the correctness of my assertion.

Such noble examples are sure to be emulated by many others in the future.

The wonderful growth and development of this country is unparalleled in the history of the past, and it is certain to go on in even more rapid strides for years to come. Its educational and scientific institutions will be placed on a corresponding plane (as compared with other parts of the world) with its industrial, its financial, and its political relations.

There is another point worthy of remark. Men of wealth, in common with other men of intelligence, like those devoted to literature or science, have a desire to be remembered after death. They have a dread of having their names and the record of their lives pass into utter forgetfulness or oblivion. To avoid this, the resting-places of the dead are everywhere crowded with cenotaphs and memorials. This is strikingly manifested in some parts of the country by the most expensive monuments and mausoleums of modern times. They crowd each other in some of our cemeteries to such a degree that they lose all their individuality in their multiplicity, and the names which they are intended to keep alive are forgotten in the observations as to the comparative merits of the architect or stonecutter who has erected them. The only question asked is, " How much did it cost ? " and the only suggestion is that of vulgar wealth. " Yet all here," to quote from quaint old Sir Thomas Browne, " are but Babel vanities. Time sadly overcometh all things, while her sister, Oblivion, reclineth somniferous, making puzzles of Titanic erections and turning old glories into dreams."

The only lasting monument a man can build is the reputation he makes during life and the memory of the benefit which he has, in some form or other, conferred on those who live after him.

> " For the good dead through the ages,
> Lingering in historic pages,
> Ever gleam and grow immortal,
> Unconsumed by moth and rust."

From all these considerations I feel justified in expressing the belief that the ideal of the future of the Academy which I have given will at no remote period prove to be history. I hope to live to see it well begun, and I have the strong conviction that some now present will see it in full accomplishment. Some men of wealth, fully comprehending the importance of this Academy, not merely to the profession, but still more to the public, will esteem it a privilege to have his name prefixed to our new hall by furnishing the requisite sum to build it and perfectly equip and support it ; others will contribute the necessary amount to give their names to each of the special museums that I have mentioned, and others will place their names on an alcove in the library.

I here crave indulgence for one remark, the only one personal to myself.

I trust this evening will end on my part all official connection with any medicinal societies. The remainder of my life, except the time necessary for bread-winning, will be devoted to putting on record the results of more than forty years of study, observation and experience, with the hope that this may be of some value to the younger men of the profession, and to doing all in my power to urge forward that future of our Academy which I have anticipated.

I have but a few words to add, before introducing my successor.

Some years ago, when elected to a similar honor in another society, I remarked, "Scientific societies seem to be governed in their selection of office-bearers by one of two principles. One is to confer honor on those who by their contributions to literature and science have won a right to it; the other is to select such as will most efficiently perform the duties which pertain to the office."

In the election of my successor the Academy has most happily combined both of these principles. His literary and scientific work have won for him an enviable fame and high distinction, equally in this country and in Europe. His ability as a presiding and executive officer has already been successfully tested by his former service as President of the New York County Medical Society and of the Medical Society of the State of New York. Thus he begins his career with a prestige which is a promise of great success.

I now have the great pleasure of presenting to him the "loving cup," on which his name has already been engraved, and which is to be transmitted to his successors in turn. It is ornamented with the symbol of friendship and love, and on it is the sentiment engraved, "May peace and love be multiplied unto us."

Some years ago, the phrase was very current in the political world, "Let us have peace." It is as wise a sentiment for the medical as the political world. I sincerely hope that my successor will never have to qualify this with the paradoxical appendix, "Let us have peace, even if we have to fight for it."

## AMERICAN PUBLIC HEALTH ASSOCIATION.

CONCORD, N. H., Jan. 7. 1885.—The thirteenth annual meeting of the American Public Health Association will be held at Washington, D. C., December 8-11, 1885. The Executive Committee have selected the following topics for consideration at said meeting:

I. "The best form in which the Results of Registration of Diseases and Deaths can be given to the Public in Weekly, Monthly and Annual Reports."

II. "The Proper Organization of Health Boards and Local Sanitary Service."

III. "Recent Sanitary Experiences in connection with the Exclusion and Suppression of Epidemic Disease."

IV. Healthy Homes and Food for the Working Classes." (See Lomb Prize Essays.)

V. "The Sanitary Conditions and Necessities of School-houses and School-life." (See Lomb Prize Essays.)

VI. "Disinfection and Individual Prophylaxis against Infectious Disease." (See Lomb Prize Essays.)

VII. "The Preventable Causes of Disease, Injury and Death in American Manufactories and Workshops, and the Best Means and Appliances for Preventing and Avoiding Them." (See Lomb Prize Essays.)

All persons who propose to present papers at the next annual meeting (prize essays excepted as per conditions elsewhere given) must place the same in the hands of the Secretary at least three days before the commencement of the annual session, as such papers must be examined by a committee before being read. This rule will be rigidly enforced, and all authors must be governed by it. After December 1, 1885, papers must be sent to the Secretary at Washington, D. C., care of Dr. Smith Townshend, Chairman Local Committee of Arrangements. Active and associate members have equal rights in the representation and discussion of papers. The Local Committee of Arrangements is already organized, and active work begun to make the next meeting a large and successful one.

The generous prizes offered by Mr. Henry Lomb will tend to awaken an increased interest in the great work which this Association has for years been successfully prosecuting, and will add much to the already more than national reputation of its beneficent undertakings.

The co-operation of all persons interested in the public health, or in any subject allied to sanitary science, is respectfully solicited. A circular giving full and concise information regarding local matters, programme, transportation, etc., will be issued in due season before the meeting.

## THE LOMB PRIZE ESSAYS.

Mr. Henry Lomb, of Rochester, N. Y., has offered through the American Public Health Association the sum of two thousand eight hundred dollars, to be awarded as first and second prizes for papers on the following subjects, and according to conditions mentioned elsewhere:

I. "Healthy Homes and Foods for the Working Classes." First prize, $500; second prize, $200.

Essays to be of a practical character, devoid as far as possible of scientific terms. They must be within the scope and understanding of all classes, and designed especially for a popular work.

*Judges.*—Dr. E. M. Moore, Pres. State Bd. of Health, Rochester, N. Y.; Dr. C. W. Chancellor, Sec'y State Bd. of Health, Baltimore, Md.; Medical Director Albert L. Gihon, U. S, Navy, Washington, D. C.; Dr. J. H. Raymond, Health Commissioner, Brooklyn, N. Y.; Major Charles Smart, Surgeon U. S. A., Washington, D. C.

II. "The Sanitary Conditions and Necessities of School-houses and School-life." First prize, $500; second prize, $200.

The object and intention of these essays is to furnish instruction to those having the care of common schools, construction of buildings, hygienic conditions, management, etc., as well as valuable knowledge to teachers and parents upon matters allied to school interests.

*Judges.*—Hon. Erastus Brooks, LL.D., State Bd. of Health, New York; Dr. H. P. Walcott, State Bd. of Health, Lunacy and Charity, Cambridge, Mass.; Dr. Granville P. Conn., Pres. State Bd. of Health, Concord, N. H.; Hon. John Eaton, Commissioner of Education, Washington, D. C.; Col. George E. Waring, Jr., C. E., Newport, R. I

III. "Disinfection and Individual Prophylaxis against Infectious Disease." First prize, $500; second prize, $200.

This subject will embrace the kinds, value and relative merits of disinfectants, as well as the methods of use. Also the means that may be employed by the individual to avoid contagious and infectious diseases.

*Judges.*—Dr. S. H. Durgin, Health Officer, Boston, Mass.; Dr. J. E. Reeves, Sec'y State Bd. of Health, Wheeling, W. Va.; Dr. Gustavus Devron, Pres. Aux. San. Assn., New Orleans, La.; Prof. Richard McSherry, M.D., Baltimore, Md.; Prof. James L. Cabell, LL.D., University of Virginia, Va.

IV. "The Preventable Causes of Disease, Injury and Death in American Manufactories and Workshops, and the Best Means and Appliances for Preventing and Avoiding Them." First prize, $500; second prize, $200.

Under this head the conditions and necessities of the American mechanic are to be especially considered, and the thorough consideration of a class will be regarded of more value by the judges than a superficial view of the whole field. Original investigations will weigh much in awarding the prizes, while compilations from existing literature of foreign statistics will not find favor with the judges.

*Judges.*—Dr. E. M. Hunt, Sec'y State Bd. of Health, Trenton, N. J.; Dr. A. N. Bell, Editor *Sanitarian*, New York City; Major George M. Sternberg, Surgeon U. S. A., Baltimore, Md.; Major John S. Billings, LL.D., U. S. A., Wahsington, D. C.; Mr. W. P. Dunwoody, Secretary National Board of Health, Washington, D. C.

*Conditions.*—All essays written for the above prizes must be in the hands of the Secretary, Dr. Irving A. Watson, Concord, N. H., on or before October 15, 1885. Each essay must bear a motto, and have accompanying it a securely-sealed envelope. A caligraphic copy of each essay will be made by the Secretary and placed in the hands of the judges, so that they will be totally ignorant as to the author.

After the prize essays have been determined upon, the envelopes bearing the mottoes corresponding to the prize essays will be opened, and the awards made to the persons whose names are found within them. The remaining envelopes, unless the corresponding essays are reclaimed by authors or their representatives within thirty days after publication of the awards, will be destroyed unopened by the Secretary.

The judges have been selected by the American Public Health Association, the Conference of State Boards of Health, and the National Board of Health, and are empowered to reject all papers if in their opinion none are worthy of a prize. The essays awarded the prizes are to become the property of the American Public Health Association.

None of the judges will be allowed to compete for a prize on the subject upon which they are to pass judgment.

The judges will announce the awards in the second week of December, 1885, at the annual meeting of the American Public Health Association.

It is intended that the above essays shall be essentially American in their character and application, and this will be considered by the judges as an especial merit.

Competition is open to authors of any nationality, but all the papers must be in the English language.

It is expected that arrangements can be made to have these essays widely distributed to the public, and to the persons mostly interested in the respective subjects in the United States. The American Public Health Association earnestly appeals to those able to compete to take part in this work, which it is believed will do much to augment the health, comfort and happiness of the people.

Per order Executive Committee.

IRVING A. WATSON, *Secretary.*

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*On Necrology.*—The Secretary.

## LECTURES.

A LECTURE ON THE RELATION OF MADNESS TO CRIME. Delivered at the London Institution. By J. C. BUCKNILL, M.D., F.R.S., Late Lord Chancellor's Visitor in Lunacy.

PERHAPS no medico-legal question has been more discussed, and with fewer results, for the last forty years, than the one I have to introduce to you this evening. I have myself taken part in the discussion for nearly all that time, and yet it seems to me as fresh and inexhaustible as ever. To say nothing of the mass of volumes, great and small, which have been written on it in this and other countries by men of my own profession, it has engaged and baffled the utmost acumen of the greatest lawyers. It was discussed at length in the House of Lords in 1843. It was argued with the utmost ability by the greatest criminal judges before the Select Committee on the Homicide Bill in 1874; and, again, by the Royal Commission of eminent judges on the Criminal Code Bill in 1879, who declared it to be a "very difficult subject"—so difficult, indeed, that they saw no way out of the difficulty by any definition of insanity which would be both safe and practicable. It has been discussed in two important papers by the late Chief Justice Cockburn, published by order of the House of Commons; and, lastly, it has been fully and ably discussed in the second volume of Sir James Stephen's recent edition of his "History of the Criminal Law of England."

Sir James Stephen, now one of the justices of Queen's Bench, has made the criminal law his own subject. No other person can speak with anything like his minute literary knowledge of it, and his practical knowledge also has been most wide and varied. The author of the Indian Criminal Code, of the Homicide Amendment Bill, and one of the Royal Commissioners on the Criminal Code Bill, his special knowledge is unequaled, and all that he has to say on the subject commands the highest respect.

I do not propose this evening to enter at large into the medical aspect of this question—to discuss the nature of the diseases which cloud the reason, or to make any attempt to unravel those trains of deranged emotion and thought which they occasion. What I do propose to show you is that the state of the law of insanity as regards crime, when life is at stake, is as imperfect as the state of the law of homicide and murder generally, of which it forms part, and that, in the words of the Select Committee, "a new definition is urgently needed to rescue the law from its present discreditable state; for, as they say in their report, "if there is any case in which the law should speak plainly, without sophism or evasion, it is when life is at stake; and it is on this very occasion that the law is most evasive and most sophistical."

What is insanity? Medically, it is disease of the brain affecting the mind. Formerly, medical men recognized only the grosser forms of madness. Dr. Willis, lecturing to the College of Physicians in 1822, recognized only two conditions or varieties of madness, namely, the high and the low state—mania and melancholia.

Now, medical men recognize a great variety of forms and degrees of insanity, and physicians do rightly endeavor to recognize the earliest and slightest forms and degrees of insanity, because these forms and degrees are the most curable, and to cure insanity is the physician's especial duty. The physician must, therefore, observe the causes of insanity in order to remove them.

But the duty of the lawyer leads him to neglect the causes of insanity, and to regard almost entirely its consequences, in order to ascertain the influence of insanity upon the conduct. Conduct is the outward expression of the mental state; but insanity is frequently of such kind and degree that it does not influence the conduct so as to make the insane man break the law; and thus it becomes the lawyer's task to discriminate between insanity which makes a man break the law from that which does not. It is admitted that a man is not responsible for breaking the law if his action in doing so be helpless. It is admitted that by responsibility is here meant punishability, and that the punishability of an offender is strictly a legal question to be determined by lawyers, physicians as such having nothing to do with it. But physicians who are conversant with the insane, and who know their characteristics, who can distinguish the forms and degrees of the malady, their causes and consequences, can instruct lawyers so as to enable them to distinguish the different kinds of insane persons, and the different kinds of their conduct; to distinguish that conduct which is the result of insanity from that which is not the result of insanity—that which they can help, and for which they are therefore punishable, from that which they cannot help, and for which they are therefore not punishable.

The physician must distinguish, as the lawyer and the public do, between slight medical forms of insanity and grave legal forms of insanity. The definition of medical insanity as disease affecting a man's mind, he must, therefore, supplement with a medico-legal definition. Definitions of insanity are most difficult and arduous. They are either too narrow, and become meaningless, or too wide, and the whole human race are involved in the drag-net. According to the *Times*, July 22d, 1854, Lord Blackburn said: "I have read every definition of insanity which I ever could meet with, and never was satisfied with one of them, and have endeavored in vain to make one satisfactory to myself. I verily believe that it is not in human power to do it."

Since this was said before the Select Committee on the Homicide Law Amendment Bill in 1874, Mr. Justice Stephen has attempted a definition as follows: "Sanity exists when the brain and the nervous system are in such a condition that the mental functions of feeling and knowing, emotion and willing, can be performed in their regular and usual manner. Insanity means a state in which one or more of the above-named mental functions is performed in an abnormal manner, or not performed at all, by reason of some disease of the brain or nernous system" (p. 130). But this is a medical definition, covering the slightest deviation from mental health arising from hysteria or alcohol, from bile or gout. It includes states of feeling as sensation, which may not affect the mind. It includes abeyance of mental functions, which is not insanity; for, when the mental functions are not performed at all, there is no insanity.

It is clear from the context that this definition of insanity would include more than Mr. Justice Stephen could allow to be irresponsible; and no good is gained by thus analyzing the mind, and detailing the result of the analysis, more or less complete, as functions which may be separately affected. I shall myself venture to make one or more medico-legal definitions of insanity. *Insanity is incapacitating weakness or derangement of mind caused by disease.* It seems to me to be practically useful and scientifically accurate to make a distinction between weakness and derangement of mind. It seems to me also that all insanity which is not weakness will fairly come under the head of derangement in its widest sense; for morbid states of the emotions derange the play of mind. But the all-important term in the definition is, of course, the attribute which points to the want of power to do something. In criminal inquiries, it means incapability of abstaining from the criminal act. It means that condition of irresponsibility pointed to by Lord Bramwell in Dove's trial—Could he help it? It means that which has been much insisted upon by medical writers and great legal authorities, the loss of self-control. Lord Chief Justice Cockburn and Justice Stephen have both expressed the strongest opinion that this state of mind caused by insanity ought to remove responsibility.

Other judges, however, have raised strong objections to the term loss of self-control, and not, I think, without reason. As a matter of fact capable of proof, there is more or less of self-control in the condition of the insane, and more or less loss of self-control in the conduct of sane criminals. But the term incapacitating is less dubious. If a man have such mental disease that he is incapable of obeying the law, that man clearly ought not to be punished by the law. Justice Stephen says, "To threaten such a man with punishment is like threatening to punish a man for not lifting a weight which he cannot move" (p. 172).

In the relations of law to insanity, the question of capacity or incapacity seems always to be involved. In inquisitions, the question is whether a man is capable of taking care of himself or his affairs ; in probate cases, the question is whether a man was capable of making a reasonable will ; and in criminal trials, whether a man was capable of avoiding the compulsion of disease to crime.

Incapacity therefore is, and must be, the real test of responsibility, for otherwise the law would be both foolish and cruel. This principle of law being granted, the working law must go further, and declare what shall be held to constitute incapacity. It does so in other respects ; for instance, it declares that a child of such tender years that it has no discretion is not punishable, and that a man under absolute compulsion of any kind is not punishable.

With regard to insanity, the judges have laid down rules by which they attempt to distinguish an insane offender who is capable of avoiding his offence from an insane offender who is incapable of avoiding his offence on account of mental disease. These rules, which constitute the law of insanity in relation to crime, have varied from time to time. They reflect, more or less, the knowledge of the age in which they are made. From the nature of the case, they cannot precede the knowledge which men have of nature ; and the knowledge which men have of the nature of disease has been very slowly acquired, and is still far from perfect. The drugs and the instruments they used but a few years ago are now curiosities, only to be met with in museums ; and new discoveries which invalidate old beliefs are still frequently made. Alteration of the law follows slowly in the wake of increasing knowledge ; but still it does follow and change as knowledge advances ; and I have no doubt that, when the knowledge of insanity possessed by physicians can be shown to be complete, the law of insanity will, after more or less delay, due to professional conservatism, be brought into reasonable agreement with it.

Lord Coleridge, not long ago, said in court that "to adhere too persistently to the old law is to forget that the law grows ; and that, though the principles of law remain, yet it is one of the advantages of the common law that these principles are applied to the changing circumstances of the time."

No circumstance of the time is so changing or so important as the knowledge which man possesses of the operations of nature ; and in no special field of knowledge has the circumstance been more changing or more important of late years than in the pathological explanations of insanity. Unfortunately, theory has oftentimes outrun, obscured and discredited knowledge ; and it is therefore not surprising that the powerful and responsible officials who administer and alter the common law should refuse to make changes, of the reason and necessity of which they have not been convinced.

But we must no longer delay to inquire what the law is. I may fairly claim to omit any reference of its earlier phases, and to come at once to that important statement of the law as it was made by fourteen out of the fifteen English judges in reply to questions put to them by the House of Lords after McNaghten's acquittal on the charge of the murder of Mr. Drummond in 1846. I have the text here, but it would take too long to read it *in extenso*. The first and the fourth questions and answers refer to delusion. McNaghten, you may remember, shot Mr. Drummond under the influence of a delusion. The judges declare, with regard to delusion, that it is law that the accused is in the same situation as to responsibility as if the facts with respect to which the delusions exist were real. For instance, he might kill a man whom he really thought to be going to kill him, but if he killed a man whom he madly thought to have inflicted any injury upon him, it would be murder. The second and third questions and answers deal with the terms in which the prisoner's state of mind at the time when the act was committed ought to be put to the jury; and in these the law of responsibility is tersely declared thus:

"To establish a defence on the ground of insanity, it must be clearly proved that, at the time of committing the act, the accused was laboring under such a defect of reason from disease of the mind as not to know the nature and quality of the act he was doing, or, if he did know it, that he did not know what he was doing was wrong."

This is regarded by the great majority of the judges as the law, and the whole law, on the subject-matter; and I think that the contention of Lord Chief Justice Cockburn and of Mr. Justice Stephen, that it is only such part of the law as sufficed to answer the questions of the House of Lords, leaving other important portions of the law unexpressed, cannot be maintained, for the following reasons:

1. It does not appear that the fourteen judges who concurred in answering the questions of the Lords felt any disinclination to expound the law fully in what has been called an extra-judicial judgment. One judge alone, Mr. Justice Maule, did appear to entertain an objection, and, in consequence thereof, he made separate replies, saying as little as he could.

2. The questions were formulated by members of the House of Lords, who were themselves great lawyers, for the evident purpose of eliciting an explicit declaration of the law.

3. One of the great judges who took an active part in framing the declaration of the law has left it on record that he meant it to be a full exposition of the law. This was Lord Wensleydale, replying to Mr. Waddington's question before the Royal Commission on Capital Punishment. "You do not think that the sort of insanity which exempts a person from capital punishment in case of murder could be more accurately defined to the jury than it is in the resolutions of the judges in McNaghten's case?" To this, Lord Wensleydale replied: "I do not think it can. I entirely concurred in that judgment, and took a share in the preparation of it, with my late excellent friend, Chief Justice Tindal, who

took very great pains, I know, to lay down the law most correctly. I have always acted upon it, and I think it quite right. Whether it could be improved in any respect, I am not prepared to say until this objection shall be made and discussed."

4. Mr. Justice Stephen, who more than any one contends that the law was, on this occasion, insufficiently expressed, and who maintains that its strict enforcement would lead to "monstrous consequences," fully admits that it is practically the law of the land. "It has been the general practice ever since," he says (p. 153), "for judges charging juries in cases in which the question of insanity arises, to use the words of the answers given by the judges on that occasion. It is a practice which I have followed myself on several occasions; nor, until some more binding authority is provided, can a judge be expected to do otherwise, especially as the practice has now obtained since 1843."

5. And, finally, it is the latest exposition of the law in this country, and in this city, for in two trials at the Central Criminal Court, in its sittings last autumn, this law was declared to the jury in its most unconditional simplicity.

On the trial of William Gouldstone, before Mr. Justice Day, for the murder of his five children, the jury were charged that "if the prisoner, at the time he killed the children, knew the nature and quality of the act he was committing, and knew that he was doing wrong, then he was guilty of wilful murder. The nature and quality of the act meant that the man knew what it was that he was doing, that is to say, that he knew he was killing a fellow-creature. He repeated that, if a man killed a fellow-creature, knowing at the time he was doing wrong, then he was guilty of wilful murder."

At the next sittings of the Central Criminal Court, on the trial of James Cole for murder, Mr. Justice Denman told the jury that "to prove the prisoner was not responsible, it must be shown that he was suffering from such a state of mental disease as not to know the nature and quality of the act he was committing, or that it was wrong." In passing sentence of death upon James Cole, Mr. Justice Denman further said: "An attempt has been made to make out that you were irresponsible; that attempt has failed, and I must express my opinion that, according to the law of England, it has rightly failed. Although it was, I think, established in evidence that you had been suffering from delusions, I cannot entertain a doubt that on the occasion on which you violently caused the death of your child you knew you were doing wrong, and knew that you acted contrary to the law of this country, and that you did it under the influence of passion, which had got possession of your mind from want of sufficient control, the result being that the poor child came by a sudden and savage death."

The language of this sentence is remarkable as showing with what exact fidelity the judges of the present day adopt and administer the law of their predecessors as it was declared to the House of Lords; namely, that notwithstanding the existence of delusions (the delusions were that he was being poisoned, and that men were hid under the floor and in a cupboard to injure him), the prisoner is punishable if he knew that he was acting contrary to the law of the land. Mr. Justice Denman's language is further remarkable from his employment of the term control. He inferred, not the innocence, but the guilt of a man suffering from delusions, from not having exercised sufficient control over his passion.

Such being the law, so established that the judges cannot be expected to do otherwise than to use the very words of it in charging juries, let us now devote a little time to the inquiry of what the judges themselves think of it; and first let us hear what some of the judges say who approve of the law. The first I shall cite is Lord Blackburn, Chairman of the Criminal Code Bill Commission in 1879, which Commission was satisfied with expressing the existing law with but slight verbal alteration, namely, the change of "not knowing the nature and quality of the act" into "incapable of appreciating the nature and quality of the act."

In his evidence before the Select Committee on the Homicide Law Amendment Bill, 1874, Q. 276, Lord Blackburn gave some details of a trial in which "he felt it quite impossible to say that the prisoner ought to be punished, although, on this definition, you would be obliged to say she was guilty." Therefore, he says: "I told the jury that there were exceptional cases, and on that the jury found her not guilty on the ground of insanity, and I think rightly."

But what does this exceptional case of Lord Blackburn's mean if it does not mean that, if you put the law in force, you will hang innocent people?

I, also, in the course of a large experience, can call to mind another exceptional case which is the converse of Lord Blackburn's. I can remember one case, and one only, of a lunatic on trial for murder, who really did not know the nature and quality of the act which she had committed. It was that of a maniacal woman who had drowned her two children in the Exeter Canal. She was so mad when placed in the dock, that Mr. Justice Coleridge, father to Lord Coleridge, saw that she was unfit to plead. He sent for his brother judge from the Nisi Prius Court, and well I remember seeing the two judges standing in their robes of different color, and talking low to each other as they looked at the prisoner, and formed their own judgment of her mental state, and Mr. Justice Coleridge ordering her removal to the county asylum. Before the next assize she had completely recovered, and I again received an order to produce her in Court, and Mr. Justice Coleridge (for he again was the judge), without taking any evidence, directed the jury to find a verdict of not guilty, on the ground of insanity; and, upon that verdict having been given, he ordered her to be given into the care of her friends. I fancy this procedure was not quite regular, but it was most sensible and humane, for she was innocent and she was sane.

The case supplementing Lord Blackburn's which did not come within the law, goes to prove that, when a prisoner is so mad as actually to come within the definition of the law, the formalities of the trial may be superfluous.

Again, before the same select committee, Lord, then Baron, Bramwell said: "I think, that, although the present law lays down such a definition of madness, that nobody is hardly ever mad enough to be within it, yet it is a logical and good definition." I know not how it can be logical to make a law of exemption which exempts nobody, or how a definition can be good which includes nothing.

But Lord Bramwell's judgment of what, using the words of the law, we may fairly call the nature and quality of the law, will be fully endorsed by every one who really knows lunatics and the motives of their conduct. "Nobody is hardly ever mad enough to be within it." It would be impossible to invent a more sweeping condemnation of the law than is expressed in that pregnant sentence.

And now let us hear what those judges say who do not approve of this law. The late Lord Chief Justice Cockburn, in his memorandum, July 8th, 1884, on the Homicide Law Amendment Bill, says: "I concur most cordially in the proposed alteration of the law, having been always strongly of opinion that, as the pathology of insanity abundantly establishes, there are forms of mental disease in which, though the patient is quite aware that he is about to do wrong, the will becomes overpowered by the force of irresistible impulse. The power of self-control, when destroyed or suspended by mental disease, becomes, I think, an essential element in the question of responsibility." In his memorandum of June 12th, 1879, the Chief Justice criticises the law of the Code Bill, which repeats that of the fourteen judges. He says that the language of the essential sentence, namely, that the accused did not know the nature or quality of the act, or that it was wrong, is loose and uncertain; and that it is "language not the less loose and uncertain because it is used by learned judges." Wrong, he thinks, must be understood to be legally wrong; but what is meant by the nature and quality of the act, he says that he really does not know. To this and to much more criticism he subjected the law, so as to leave no shadow of doubt that he thought that law insufficient and bad.

Now hear what Mr. Justice Stephen says, not when he was contending for his Amendment Bill, but since he has become a justice of the Queen's Bench. How much he may feel himself at liberty to declare the existing law to be a downright bad law, I do not know; but I observe that, as one of the Royal Commissioners on the Criminal Code Bill, he says that a judge "is bound to decide in accordance with principles already established, which he can neither disregard nor alter, whether they are to be found in previous judicial decisions, or in books of recognized authority, and that, in consequence, the elasticity of the law is much smaller than it is often supposed to be" (Report, p. 7). I suppose, therefore, that, as a judge, the expression of his opinion is under some restraint.

In his great work on "The History of the Criminal Law," vol. ii., Mr. Justice Stephen declares his opinion that the "law of England on this subject is insufficiently expressed" (p. 128). Respecting delusion, which, he says, may interfere more or less with every function of the mind, which falsifies all the emotions, alters in an unaccountable way the natural weight of motives of conduct, weakens the will, and enfeebles every part of the mind, he declares that "upon these questions the answer of the judges throws no light at all, because it assumes the man to be insane in respect of his delusion only, and to be otherwise sane; in a word, the prisoner is treated as a sane person under a mistake of fact for which he is not to blame" (p. 157).

With regard to the emotions and the will, he says: "If the answers were meant to be exhaustive, they certainly imply that the effect of insanity, if any upon the emotions and the will is not to be taken into account in deciding whether an act done by an insane man did or did not amount to an offence; but they do not explicitly assert this, and the proposition that the effect of disease upon the emotions and the will can never, under any circumstances, affect the criminality of the acts of persons so afflicted is so surprising, and would, if strictly enforced, have such monstrous consequences, that something more than an implied assertion of it seems necessary before it is admitted to be part of the law of England" (p. 159).

Again, he says that, "carefully considered, they [that is, the judges' answers] leave untouched the most difficult questions connected with the subject, and lay down propositions liable to be misunderstood, though they might, and I think ought, to be construed in a way which would dispose satisfactorily of all cases whatever." The propositions, as construed by Mr. Justice Stephen, certainly offer a remarkable example of legal dialect. Thus construed, wrong may mean either illegally or morally wrong, and knowledge may mean a calm judgment of the circumstances and consequences of the act. If it be really possible to construe the propositions of the judges as Justice Stephen thinks they might and ought to be construed, I can well believe that "to read judicial decisions correctly is," as he says, "an art in itself, to be acquired only by long professional practice, aided by rules well known to lawyers, but unknown to medical men." But I am happy to say the art of construing does not satisfy the sound common sense of Mr. Justice Stephen, who concludes his efforts in that direction by a distinct proposition of his own as to what ought to be the law of England, which is as different as well can be from that which is the law.

I have come, then, to the end of this part of my task, and I claim to have proved, not from the theories and imperfect knowledge of medical men, but out of the mouths of the great judges of the land, that the law of the land is, to use one of their mildest terms, "insufficiently expressed;" and, to use a stronger term, that, if strictly enforced, would lead to "monstrous consequences." It would, indeed, lead to frequent acts of the most cruel injustice. With much pleasure, I now pass with Mr. Justice Stephen to the consideration of what the law ought to be. He says:

"The proposition, then, which I have to maintain and explain is that, if it is not, it ought to be the law of England, that no act is a crime if the person who does it is, at the time when it is done, prevented, either by defective mental power or by any disease affecting his mind, from controlling his own conduct, unless the absence of the power of control has been produced by his own default."

I entirely agree with the idea contained in this proposition, but I think it would be difficult to put a good and true idea into language more open to dispute. What is meant by defective mental power which is not conditioned by disease? Is it mere folly which is meant, or is it idiocy? which, as Chief Justice Cockburn pointed out, is omitted from the present law. "No provision is made for original malorganization; in other words, for idiocy" (Memorandum, 1874). What is meant by "the absence of the power of self-control, produced by the prisoner's own default?" If states of intoxication be meant, they ought to be specified. But, if states of real insanity, caused by evil habits of any kind, are meant—as by the context I am led to suppose—then the proposition is, in this respect, impossible to act upon.

Moreover, the phrase, "prevented from controlling his own conduct," is liable to objection, and has, indeed, been objected to by many judges, and has been a little worried by Mr. Justice Stephen himself. How can it be said with accuracy that a man controls his conduct when he refrains from a crime, and does not control his conduct when he commits one? Mr. Justice Denman, as we have seen, condemned James Cole on the ground that he did not control his conduct. Surely the most undoubted lunatic, who purposes and plans and executes the most insane homicide, does control his conduct, though in an insane fashion, as the sane man who is tempted to crime and refrains from it controls his conduct sanely, from higher or lower motives of duty or selfishness. For my own part, after having long used the term "loss of self-control" in this relation, I give it up as altogether too loose, ambiguous and inaccurate for so grave and precise a purpose as the definition of responsibility. There are many more definite terms to choose from—incapable, unable, compelled to, cannot help, helpless, cannot avoid; and, of these, the first seems as good as any, and it is used in the Criminal Code bill: "incapable of appreciating." I would suggest, therefore, the following simplification of Sir James Stephen's proposed law of England as it ought to be: *No act is a crime, if the person who does it is at the time incapable of not doing it, by reason of idiocy or of disease affecting his mind.* I know not whether Lord Blackburn would think that this definition would be leaving the question "too much at large," as he said; but surely it would be better than any definition which would leave exceptional cases to be provided for. I think it ought not to be objectionable to Lord Bramwell, who, when trying a lunatic, who was also an abominable villain, put the law into a nutshell when he said that the real question was, "Could he help it?"

It contains no medical theories or views, but is wide enough to contain all medical knowledge, and is yet definite enough to meet the practical requirements of the lawyers; and it is, I believe, entirely in accordance with Mr. Justice Stephen's own line of thought as to the principle of the needed amendment of the law, although it is expressed more simply and tersely than his own proposition of what the law ought to be.

Having come to this conclusion, I must still crave your indulgence for a short time, while I make some remarks upon procedure, *i. e.*, upon the manner in which the law, as it stands, is administered, and add some suggestions perhaps as to its possible amendment. In this country, the questions of the commission of a crime and its excuse on the plea of insanity are, as you know, the joint subjects of our judicial investigation at the trial of the prisoner. But this is not the case in other countries; notably, it is not the practice in France, where the code of procedure enacts that when the magistrate during the examination perceives, or is informed by attested certificates, that the person accused of crime does not enjoy the full measure of his intelligence, he is to suspend his examination, and to make an order by virtue of which one, two, or three experts are requested to examine the accused. These experts having been sworn, examine into the particulars of the crime, and the prisoner's history, and they examine the prisoner himself as often as need be, either in prison or elsewhere; and they can even have him removed to a lunatic asylum for the purpose of prolonged observation. If they report that the prisoner is insane, the magistrate generally accepts their verdict as final, and issues an order of *non lieu*, or no jurisdiction. It is upon the report of these experts, or on the report of another set of experts whom the Court has the power of appointing if not satisfied with the first, that it depends whether the trial for the crime itself does or does not take place. But at the real trial, the question of irresponsibility cannot be raised. Practically the same system prevails in Austria and some other continental countries. In a remarkable paper on insanity as a defence for crime, read by Mr. George B. Conkhill, United States Attorney for the District of Columbia (every one will remember Guiteau's abuse of Conkhill), read before the Medical Society of New York, this most experienced prosecutor says:

"My candid opinion, resulting from a very large experience in the trial of these cases, is that, when a prisoner proposes to defend his crime on the ground of insanity, a jury specially selected for their fitness should be chosen to try the special plea, and, if the prisoner be found insane, then he should be confined in an insane prison for a time commensurate with the character of the crime; and, if the verdict of the jury be in favor of his *sanity*, then the plea should not be allowed upon the trial of the cause" (p. 219).

I suppose that, if a judge had a strong opinion that a prisoner he had condemned was really not responsible, it would be his bounden duty to convey his opinion to the executive. I cannot really believe that it can be otherwise, but I do not know, as a fact, that it is so. If the judge had not a strong opinion, I suppose he would let the responsibility for the verdict and its consequences rest upon the heads of the jury.

Surely it ought to be the duty of some responsible official to look into the circumstances of every trial in which sentence of death has been passed, and to state whether there be any *primâ facie* ground for the supposition that the condemned man was not responsible on the ground of insanity.

Whether the examination into the mental facts takes place before or after the trial, there can, I think, be no real doubt that it ought not to be secret, or loose and diffuse as to its scope, or the evidence elicited deprived of the usual sanction of fidelity, or released from the test of professional examination as to its real purpose and accuracy, or carried on under no superintending authority.

I have no objection to an unofficial examination before the trial on behalf of the prisoner, with the concurrence and consent of his solicitor; and a man put on trial for his life ought to have a solicitor, however poor he may be. A solicitor is really more important in such defences as we are considering, than a counsel, for he can collect and prepare evidence. The greatest objection to an examination forerunning the trial is that it would be almost impossible to prevent it from eliciting confession of the deed, which would often be embarrassing and contrary to the spirit of our law (although, in France, as you may know, confession is encouraged or provoked).

The examination of a man who has already been condemned to death for murder, and the formation and expression of an opinion as to whether he is insane in such a manner or degree that he ought to be reprieved, or not so, and therefore ought to be executed, imposes such a burden of responsibility, that it ought not to be laid upon any man without those easements in the discharge of duty which lighten the responsibility of all who take part in judicial investigations.

From every consideration, therefore, of judicial method and consistency, the present mode of dealing with condemned men suspected of insanity, ought to be abolished, and a systematic investigation by sworn examiners, who should give public evidence subject to cross-examination, under control of a judge, should be substituted.—*British Medical Journal.*

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## SANITARY DEPARTMENT.

THE FOOD WE EAT, THE LIQUIDS WE DRINK AND THE ADULTERATIONS WE SUBMIT TO.—Abstract of a paper read before the American Public Health Association. By Hon. ERASTUS BROOKS, Member of the State Board of Health of of New York.

If men are fearfully and wonderfully made, there is nothing more marvelous in the form of this creation than the character or substance of the food they eat. In this food there is carbon serving as a fuel for the support of animal life; and carbon, with hydrogen, oxygen and nitrogen, make the four essential elements of human life. Phosphorus, sulphur, chlorine, sodium, potassium, calcium, magnesium, iron and fluorine are but of secondary importance among the primary elements. In all these, which the animal and vegetable kingdoms provide, the sustenance of our daily existence is found. They give strength to the limbs, flesh and blood to the frame, and muscle to the whole body.

Carbon, with a little hydrogen and oxygen, the chief constituents of our food, compose the alimentary support found in butter, suet and in all these fatty or oily elements which become part of every healthy life. The flesh, blood and bones need the phosphates derived from animal and vegetable food. The iron in our blood is derived chiefly from the meat we eat, and traces of iron are found in milk, eggs and in almost all kinds of vegetables. The elements I have named are parts of our great whole, and in the food we eat their mixture is necessary to prevent waste and decay. Using any of them alone, which is almost impossible, as the combination is practically a necessity, the human system would lose about all its forces.

These elements make blood and cause nutrition. There is in them the power of respiration, and there is no real life without them. The saccharine qualities, as water and sugar, the oleaginous representing butter, the nitrogenous representing albumen and salts, the aqueous representing water and other fluids, include and conclude all sources of supply. Water in quantity, if not in variety and quality, holds all these elements. Nine-tenths of the milk we use is water. Uncooked beef contains seventy or eighty per cent. of water, and many vegetables have even a larger percentage of fluid; but, while this is true, milk is almost the only fluid that supports the human body. This fluid, besides holding water in greater proportions than almost anything else, represents sugar and casein, which, in close alliance with albumen and butter, represent in food what is oleaginous. The proportions of these ingredients in human milk are ten parts of casein, which makes blood, ten parts of butter or fat, twenty parts of carbo-hydrate or sugar, and a tracing of salt.

For infants and adults alike, physiology has proved in recent experiments that casein and albumen are the essential producers of blood, and we all know what this fluid performs in the work of rebuilding and strengthening the human frame.

The combinations of the several groups of human food are: Aqueous, saccharine, oleaginous, albuminous, gelatine and saline. The best recognized teachers of the qualities of food remind us of what is necessary to make up the deficiencies in the wear and tear of life, if we would preserve the necessary fires of animal existence. With constant waste in one direction, the necessary daily food to prevent this decay is required as the needed balance to preserve life.

Digestion depends largely upon what we eat. The quantity is oftener too much than too little. In the army and navy, in the hospitals and prisons especially, the quantity is prescribed by pounds and ounces, and based upon the work done by the consumer, and Mr. Brooks gave the quantity of food used in various prisons, used by the Esquimaux and other classes and conditions of people. The proper cooking of food is one of the fine arts, and very often the mental happiness is largely dependent upon well-cooked food, and the important and essential part of a wise, domestic home is the kitchen.

The most palatable and beneficial of our varied kinds of food is milk. Adulterations are found in much that we eat, drink and wear; and, as a general rule, we may abandon all stimulants and most condiments, except when prescribed by a physician.

The extent of food adulteration is one of the worst signs of the times. No country is free from this public evil, and it is next to impossible to reach and punish these abuses. Coffee has been adulterated until, in some instances, there is not an ounce of coffee to the pound, and three-fourths of the teas sold have been impure. Milk is adulterated in many ways, and some of them are very injurious. Spices are notoriously largely adulterated. The adulteration of drugs demands the attention of the health authorities. In spirits, especially in wines, the adulteration is much worse than in coffee, or general articles of food, and in 1881 fifty-six per cent. of 3,361 samples of wine examined were found bad, and six per cent. dangerous. Butter should come from the dairy and not from the fat of animals; and in New York forty millions of pounds have been sold in the State in a single year. In Bavaria recently an inspection resulted in the condemnation of thirty-three breweries, and in fines ranging from $50 to $250 each, and three other brewers were sentenced to eight months' imprisonment. Glucose may be harmless enough, but when thirty-five and fifty per cent. are mixed with honey and maple sugar, the deception is palpable and flagrant. Most kinds of oil are more or less impure, and the chief fraud is in calling oils by wrong names. Cheese is adulterated with potatoes or bean meal, and the rind has at times blue vitriol and arsenic to give it the appearance of age. Other poisons are used to give the cheese a biting flavor ; lard cheese is made at twenty-three factories in New York. Sugars are much less adulterated than formerly, and adulterations are now limited more to glucose than formerly.

There are before me authorities showing the extensive and carefully-planned adulterations in butter, alum, borax, barium, curd, fats, flour, gypsum, lard, lead carbonate, lead chromate, yellow potato flour, salt, sodium, silicate or soluble glass, soapstone, starch, etc. French, German and English authorities name all these uses and abuses. Lard or cheap fats are common adulterations in England as in the United States. The letters of W. A. Croffutt shows loads of sacks filled with peas and beans ground and sold for coffee, and the sweepings of factories used to adulterate ginger. Two-thirds are impure to one of the pure articles retained. Old boots and shoes literally pass through the heat of the hottest ovens to be mixed with pepper, and old tannin, removed as a nuisance, is ground into cinnamon. This class of domestic manufactures simply forbids all additional comment upon what at times is thus made and sold.

Finally, there is no more reason in truth—and there is less reason in fact—why food adulterations should be more tolerated or excused than adulterations in gold or silver, or the use of counterfeit money in coin of any kind. What is sold as food to eat, or as coffee, tea, cocoa, beer or wine, or more stimulating spirits for drink, should be pure. The gold, when adulterated for purposes of science or manufactures, should state the grains of pure gold in the coin or in the article made, whether in jewels or any other thing manufactured. The same at least should be true of the silver dollar coined at the mint and of every article of silver. Even more should this be true of what we eat and drink.

I am not surprised, however, to hear the Federal Government cited as a successful example of adulterated money by those who practise the manufacture and sale of adulterated food and drugs. We cannot always control the Government, but we can at least insist that the manufacture and sale of adulterated food and medicines shall be exposed to the public eye and punished by public law.—*Sanitarian.*

## Restriction and Prevention of Diphtheria.

The Michigan State Board of Health has issued a pamphlet upon the above subject which contains such definite and valuable information that we *(Druggists' Circular)* reproduce it for the benefit of our readers. The original numbering of the sections has been retained ; the only omissions are paragraphs 4 and 5, containing the Michigan law in relation to contagious diseases, and the special duties of health officers in that State, which regulations differ in different States. The frequency of its occurrence, and the danger, especially to young children, of the attacks of diphtheria, render it specially advisable that practical information in regard to the best methods of prevention and restriction should be as widely circulated as possible :

Diphtheria is a contagious disease, hence the strict observance of the following precautions is of great importance:

1. When a young child or a young person has a sore throat, bad odor to its breath, and especially if it has fever, it should immediately be kept separated from all other persons, except necessary attendants, until it be ascertained whether or not it has diphtheria or some other communicable disease.

2. Every person known to be sick with diphtheria should be promptly and effectually isolated from the public; no more persons than are actually necessary should have charge of or visit the patient, and they should be restricted in their intercourse with other persons.

3. Plain and distinct notices should be placed upon the premises or house in which there is a person sick with diphtheria, and no child should be allowed to enter.

6. The room into which one sick with diphtheria is placed should previously be cleared of all needless clothing, carpets, drapery, and other materials likely to harbor the poison of the disease. This room should constantly receive a liberal supply of fresh air, without currents or drafts directly upon the patient. It will be well also to have the sun shine directly into the room.

7. The discharges from the throat, nose and mouth, are extremely liable to communicate the disease, and should be received in vessels containing a strong solution of copperas (sulphate of iron), or on soft rags or pieces of cloth, which should immediately be burned.

8. The discharges from the kidneys and bowels are also dangerous, and should be passed into vessels containing a strong solution of sulphate of iron (copperas), and then be buried at least 100 feet distant from any well; or when this is impracticable they should be passed on old clothes, which should immediately be burned.

Sulphate of iron (copperas), dissolved in water in the proportion of one and a half pounds of the sulphate to one gallon of water, is a good solution for chamber vessels, water-closets, etc. When much is wanted, it may be prepared by hanging a basket containing about sixty pounds of copperas in a barrel of water.

9. The clothing, towels, bed linen, etc., on removal from the patient, should at once, before removal from the room, be placed in a pail or tub of boiling-hot zinc-solution, made in proportion as follows: water, one gallon; sulphate of zinc, four ounces; common salt, two ounces.

10. Nurses and attendants should be required to keep themselves and their patient as clean as possible; their own hands should frequently be washed and disinfected by chlorinated soda.

11. All persons recovering from diphtheria should be considered dangerous; therefore such a person should not be permitted to associate with others, or to attend school, church, or any public assembly until the throat and any sores which may have been on the lips or nose are healed, nor until in the judgment of a careful and intelligent health officer he can do so without endangering others; nor until after all his clothing has been thoroughly disinfected, and this without regard to the time which has elapsed since recovery, if the time is less than one

year. Nor should a person from premises in which there is or has been a case of diphtheria attend any school, Sunday-school, church, or public assembly, or be permitted by the health authorities or by the school board to do so, until after disinfection of such premises and of the clothing worn by such person if it should have been exposed to the contagion of the disease.

12. The body of a person who has died of diphtheria should be washed with a zinc solution of double the strength stated in paragraph 9, then wrapped in a sheet wet with the zinc solution, and at once be buried. In no case should the body be exposed to view.

13. No public funeral should be held at a house in which there is a case of diphtheria, nor in which a death from diphtheria has recently occurred. Except under extraordinary precautions, there should be no public funeral of a person who has died from diphtheria,. No child should attend, and it would be better in most cases that few adults should attend a funeral of a person dead of diphtheria.

### DISINFECTION OF ROOMS, CLOTHING, ETC.

14. After a death or recovery from diphtheria, the room in which there has been a case of diphtheria, whether fatal or not, should, with all its contents, be thoroughly disinfected by exposure for several hours to strong fumes of burning sulphur, and then, if possible, it should for several hours or days be exposed to currents of fresh air.

*a.* Because of the innumerable ways in which the contagion may be scattered about the house and premises where there has been a case of diphtheria, the entire house and out-buildings, including cellar, garret, wood-shed and privy, will usually need to be disinfected.

*b.* Rooms to be disinfected must be vacated. Heavy clothing, blankets, bedding, and other articles which cannot be treated with the zinc solution, should be spread out so as to be thoroughly exposed during fumigation, which should take place in the room where the clothing, etc., has been used in connection with the patient. For a room about ten feet square, at least two pounds of sulphur should be used ; for larger rooms, proportionately increased quantities, at the rate of two pounds for each 1,000 cubic feet of air-space.

*c.* Close all openings to the room, place the sulphur in an iron pan supported upon bricks, set it on fire by hot coals or with the aid of a spoonful of alcohol lighted by a match, be careful not to breathe the fumes of the burning sulphur, and when certain the sulphur is burning well, leave the room, close the door, and allow the room to be closed for several hours.

*d.* Care should be taken to secure the complete burning of as much of the sulphur as is possible. For this purpose the iron pan or pot in which the sulphur is to be placed may previously be heated, and may be placed in the room over hot coals in a pan of ashes set upon bricks.

*e.* Cellars, yards, stables, gutters, privies, cesspools, water-closets, drains, sewers, etc., should be frequently and liberally treated with copperas solution, made as described in paragraph 8.

*f. Body and bed clothing, etc.*—It is best to burn all articles which have been in contact with persons sick with contagious or infectious disease. Articles to be burned should be thoroughly and quickly burned, so as not to diffuse the poison. In the glowing furnace under a large engine boiler is a good place. If the burning is done in the open air it should be far from dwellings, and by a quick, strong fire. Articles too valuable to be destroyed should be exposed for one hour to a dry heat of from 240° F. to 250 F°., or be treated as follows :

*g.* Cotton, linen, flannels, blankets, etc., should be treated with the boiling zinc solution, introducing them piece by piece, securing thorough wetting, and boiling for at least half an hour. Heavy woolen clothing, silks, furs, stuffed bedcovers, beds, and other articles which cannot be treated with the zinc solution, should be hung in the room during fumigation, pockets being turned inside out, and the whole garment being thoroughly exposed. Afterward they should be hung in the open air, beaten, and shaken. Carpets are best fumigated on the floor, but should afterward be removed to the open air and thoroughly beaten. Pillows, beds, stuffed mattresses, upholstered furniture, etc., after being disinfected on the outside, may be cut open and their contents again exposed to fumes of burning sulphur. In no case should the thorough disinfection of clothing, bedding, etc., be omitted. Infected clothing and bedding have been known to communicate diphtheria months after their infection.

The foregoing methods of disinfection are applicable in other contagious diseases.

### TEMPORARY SHELTER DURING DISINFECTION.

15. Disinfection of a room always necessitates vacating it, and sometimes makes it impossible to remain in adjoining rooms ; therefore, in some cases it seems essential to have hospital, tent or other temporary shelter for the inmates of infected houses, where bathing, disinfection and washing can be done while such houses are being disinfected and put in order. On this subject local boards of health should be consulted, and should be prepared to act.

### HOW TO AVOID AND PREVENT DIPHTHERIA.

16. Avoid the special contagium of the disease. This is especially important to be observed by children and all whose throats are sore from any cause. Children under ten years of age are in much greater danger of death from diphtheria than are adults ; but adult persons often get and spread the disease, and sometimes die from it. Mild cases in adults may cause fatal cases among children. Because of these facts it is frequently dangerous for children to go where adult persons go with almost perfect safety to themselves.

17. Do not let a child go near a case of diphtheria. Do not permit any person or thing, or a dog, cat, or any other animal, to come direct from a case of diphtheria to a child. Unless your services are needed, keep away from the disease yourself. If you visit a case, bathe yourself and change and disinfect your clothing before you go where there is a child.

18. It is probable that the contagium of diphtheria may retain its virulence for some time and be carried a long distance in various substances and articles in which it may have found lodgment. Diphtheria contracted from germs carried

several blocks in a sewer may perhaps be as fatal as when contracted by direct exposure to one sick with it. While it is not definitely proved that the germs of diphtheria are propagated in any substance outside the living human or animal body, it is possible that they may be found to be thus propagated. Therefore, and because the breathing of air laden with emanations from decaying fruit, vegetables, or meat, or from sewers, cesspools, sinks and other receptacles of filth, is believed to endanger health, great care should be taken to have the house, premises and everything connected with dwellings kept clean and dry; to have sewer connections well trapped, and house-drains constantly well ventilated; and and to have all carriers of filth well disinfected. Do not permit a child to enter a privy, water-closet, cesspool or sewer into which discharges from persons sick with diphthera have entered, nor to drink water or milk which has been exposed to such air.

19. Do not permit a child to ride in a hack or other closed carriage in which a person sick with diphtheria has been, except the carriage has since been thoroughly disinfected with fumes of burning sulphur, as specified in paragraphs 14, 14*b*, 14*c* and 14*d*.

20. All influences which cause sore throats probably tend to promote the taking and spreading of this disease. Among the conditions external to the body liable to spread diphtheria, perhaps the most common are: Infected air, infected water and *contact with infected substances or persons.* Because of this, as a means of lessening the danger of contracting other diseases, the following precautions should always be taken, but more particularly during the prevalence of any such disease as diphtheria:

21. Avoid exposure to wind and to breathing cold, dry air; also, the use of strong vinegar or any other article of food which tends to make the throat raw and tender.

22. Do not wear or handle clothing worn by a person during sickness or convalescence from diphtheria.

23. Beware of any person who has a sore throat. Do not kiss or take the breath of such person. Do not drink from the same cup, blow the same whistle, or put his pencil or pen in your mouth.

24. Beware of crowded assemblies in unventilated rooms.

25. Do not drink water which has a bad taste or odor, or which comes from a source that renders it liable to be impure, especially if there is reason to believe it may contain something derived from a person sick with diphtheria.

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LEPROSY.—In regard to the contagiousness of leprosy, one of the highest authorities, Erasmus Wilson, in his "Diseases of the Skin," says: "The doctrine of infection and contagion, as applied to elephantiasis (leprosy), has long been abandoned. Several of the older medical authorities expressed their doubts, and modern authors all agreed in denying it. Not only is this the prevailing opinion, in respect to the danger of it, so far as ordinary social intercourse is concerned, but it is also denied that a husband can communicate the disease to his wife, or a wife to her husband, or that a nurse can convey the disease to an infant by suckling."

# ORIGINAL CORRESPONDENCE.

COTTAGE LAWN, NEAR ELMO, KY., Jan. 25, 1885.

*To the Editor of Gaillard's Medical Journal:*

DEAR DOCTOR: Since reading a report of an obstetrical case in your JOURNAL for July, 1884, of the delivery of a child with membranes unruptured, I have intended to report one that occurred in my practice some time previous to the date given by W. R. C. The case was reported at the time (verbally) to the Christian County, Ky., Medical Society, and created some discussion, being an entirely unique case to all present, among whom were some of forty years' practice with extensive obstetrical experience. I addition to Dr. W. R. C.'s case in the July number, I notice a somewhat more unique case, because at term, by my friend Dr. N. L. Guice, of Fayette, Miss.

You make mention in a note of a similar experience reported by Van Peyma, but as my case has some peculiarities that neither of these possesses, and as they are all I have ever seen reported, after having, before their publication, examined carefully all the literature upon the subject at my command, and failing to find any similar case, I have concluded to add this to the list and report it *in extenso.*

In January, 1883, Mrs. B. emigrated from Virginia to Kentucky, arriving in this county the subject of chronic malaria. Her previous history, as given by herself and husband, was that she had been the subject of chills at irregular periods for three years; that they had never been arrested for more than three weeks at a time; that she had taken, first and last, many bottles of quinine and a great deal of mercury, principally in the form of blue mass and calomel.

Though apparently a stout woman, very corpulent, weighing 168 lbs., she was really the opposite: complexion pale, muscles soft and without tone, tongue bloodless and so relaxed as to constantly retain the indentations of the teeth; in fact, general anæmia. Liver very much enlarged, somewhat tender, and wholly inactive; white stools, considerable vesical trouble, irritable bladder, occasional hæmaturia, frequent micturition and symptoms of chronic cystitis.

From general cachectic appearance, and some renal symptoms, Bright's disease was suspected; but examination of urine, chemical and microscopical, revealed no albumen, although at that time conception had occurred; no tube casts, etc.; on standing, there was a sandy deposit.

Suffice it to say that she was placed upon a general alterative and tonic treatment, embracing podophyllin, taraxacum, leptandrin and nitro muriatic acid for hepatic trouble; iron, quinine, arsenic and strychnia for malaria and as systemic tonics. The bladder was occasionally washed out with warm water through a double catheter, with the constant administration of citrate of lithia, until at the period of her accouchement, and for six weeks previously, she was entirely relieved of all her troubles, and was apparently in good health, but was so large that she expected twins, and I supposed there was an unusual quantity of liquor amnii.

I should have stated that she did not become a patient of mine nor begin this treatment until the 10th of June, 1883. She was thirty-three years of age, mother of four children, and had had one abortion.

On November 27 I was sent for to attend her in her fifth full-term labor. On arrival, at 7 P.M., I was told she had been having just such "pains" since 9 A.M.; uterine contractions feeble, and with long intermissions; no dilatation of os. At 10 P.M. sufficiently dilated to ascertain the presentation, which was the first occipito-pubic.

This tedious, lingering condition—os rigid, not dilatable—continued until 9 A.M. November 28th, when contractions became much more energetic, but still short and too weak. A full dose of quinine and whiskey was given. Within an hour the contractions were sufficiently vigorous and persistent, yet they made but little progress towards a termination of labor. Not until 5 P.M. was the os sufficiently relaxed to justify the administration of ergot, and as the pains for over an hour had again become intermittent and weak, though there was no bag of water presenting to aid dilatation, I gave ergot and quinine combined, supposing the water behind.

At 9 P.M. the child was born, gliding into my hands without a cry or movement, followed by no discharge whatever, neither water nor blood. My astonisment may be imagined, but I cannot describe the puzzled condition that for a few minutes I found myself in. At first I supposed the child dead, but on examination found it plump, and well-developed, and discovered that it made a sort of squirming movement. I turned it on its side, patted up and down the spine, but it gave no cry. At this moment I discovered that it was completely enveloped in the membranes, which fitted closely to its entire form, no water—not a drop—intervening, the membranous envelope fitting as closely, and almost as tightly, as a circus actor's fleshing. As quickly as I could realize its perilous situation, I plunged a finger through the membrane into the mouth, and pulled it from the face, and almost instantly she, for it was a full-term female, cried aloud for at least ten minutes.

The entire caul had to be literally pulled from its body in strips, so close was its adhesion to the skin; the only opening was at the umbilicus, through which the cord passed. There was no discharge of water, and only a few ounces of blood. Though not tested by a thermometer, yet the temperature of the vagina, and even vulva, to the touch seemed much higher than normal, and the former was much drier, and required the hand to be thoroughly and more freely oiled than is usual in making examinations.

The child, though at full term and well developed, only weighed eight pounds, and not an ounce of amniotic fluid escaped from the vulva, or even followed the expulsion of the placenta, which was expelled by the contractions of the uterus, without artificial aid, within half an hour of the birth of the child.

Now, how is the woman's extreme abdominal enlargement to be accounted for? It is true her abdominal walls were heavily cushioned with adipose tissue, but not enough to account for her girth dimension. There was no lochial discharge until the fourth day, when it made its appearance simultaneously with the lacteal secretion, which, as usual, was announced by a chill, but which was somewhat prolonged, the milk fever that followed the reaction being more pronounced, with temperature 101, pulse 103 ; though the usual accompaniment of the lacteal secretion, yet, on account of the peculiar and unique character of the labor, the entire absence of amniotic fluid and a mere show of blood, I suspected septicæmia, and began to make a mental collection of instruments and aseptic agents, to form an armamentarium with which to wage war against the dreaded monster. All the so-called aseptic agents, and a variety of syringes, with all sorts of tubes, nozzles, catheters, etc., marched in procession before my mental vision and presented themselves for trial. But fortunately for the patient the pyrexia that followed the chill proved to be evanescent, and after a few doses of quinine, which it is my custom to give during and after labor, convalescence was rapid and uninterrupted.

December 15th, 1884.—After an unusually fatiguing day of household duties, she had an abortion at about six weeks, but in ten days was up and well. With this exception she has enjoyed uninterrupted good health since her confinement in November, 1883.

Though this report has already grown beyond its intended limit, yet, with your permission, as some medical philosopher may be able to connect in some way the child's ailments and final death with its *dry* intrauterine growth and peculiar birth, a brief note of its subsequent history may not be without interest to some of your readers.

Though, as previously stated, a plump, well-formed, and apparently perfectly-developed child, nursing freely from the commencement, yet, as the sequel proved, there was some defect from birth connected with its gastro-intestinal system. Attention was first drawn to a peristent and unyielding constipation, which required large doses of the ordinary cathartics to produce a stool. But this constipation was accompanied with an almost constant effort and disposition to evacuate the bowels. It seemed at first to be caused by a spasmodic stricture of some portion of the rectum. On carefully introducing an elastic catheter, an obstruction could be felt. This stricture was always met with on the introduction of the catheter if at the time the little patient was straining, but not if it was asleep, or when there was no desire to have an action. The obstruction could not be passed or overcome by the catheter unless a wire stylet was passed into the catheter to strengthen it, and then only by patient effort; but when it did pass the obstruction, invariably a discharge of sulphuretted hydrogen would escape through the open or external end of the instrument, and sometimes its withdrawal would be followed by a fecal discharge from the bowels.

After six months, by the persevering use of the catheter and of mild laxatives, this condition was entirely relieved, and the child became regular in its bowels without the aid of medicine, and was evidently in a thriving condition for about three months, when suddenly, and without perceptible cause, an almost constant diarrhœa developed, as little under control as the constipation had been. The various vegetable astringents, dieting, etc., failed to produce but temporary results, and at about its eleventh month it was attacked with meningitis accompanied by spasms, in one of which it died. Yours truly,

J. P. Thomas, M.D.

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Influence of Parturition in Shaping the Human Head.—Dr. Fordyce Barker says about fifteen years ago there was a good deal of discussion among obstetricians with regard to the influence of parturition in giving shape to the human head. He then instituted some investigations at Bellevue Hospital, carried out by the house staff, regarding the shape of the head at birth and for some time afterward. These investigations showed that the head of the infant, while being molded to pass through the pelvic canal, became flattened at portions where there was the greatest pressure, and filled out at portions where the resistance offered by the hard parts was least. For instance, if the occiput presented at the left ilio-pectineal eminence, and the sinciput at the right sacro-iliac synchondrosis, the corresponding diameter of the child's head would after birth be found to be shorter than the opposite diameter. By this means he had often been able to determine, when called in consultation within forty-eight hours after a child's birth, what had been the presentation. This peculiarity of shape gradually disappeared after the birth of the child. Whether it had more or less of permanent influence he was unable to say.

Syphilis from Skin Grafting.—Dr. Féréol (*British Medical Journal*) reported the following interesting case at a meeting of the Société Médicale des Hôpitaux, of Paris. A man was attacked by gangrenous erysipelas of the upper third of the left thigh, from which resulted a large, obstinate ulcerating surface. Forty-five grafts, taken from five different persons, were applied to the ulcer, of which thirty-three adhered. Eleven days after this, twenty-eight grafts, taken from the buccal mucous membrane of a rabbit, were applied, but all failed. Six days subsequent to this latter grafting, forty grafts, supplied by seven persons, were placed on the internal portion of the ulcerated surface. Thirty of these were successful, and cicatrization was rapidly proceeding, when, in the course of two weeks, a greyish ulcer, followed by several similar ulcers, involved the site of the first grafting. Ten weeks after the first series of grafts had been applied, a copious roseolar rash appeared, and was soon followed by crusts on the hairy scalp and mucous patches in the mouth. The son of the patient, who had furnished some of the first series of grafts, consulted the physician for mucous patches around the anus. This son had had a chancre, eighteen months previously to furnishing the grafts, which had not been treated. This case strongly illustrates a possible danger to be guarded against in skin grafting.

# BIOGRAPHY.

## EDWIN SAMUEL GAILLARD, A.M., M.D., LL.D.

BORN JANUARY 16, 1827; DIED FEBRUARY 2, 1885.

DR. GAILLARD was born in Charleston District, S. C. He was the son of Dr. Edwin Gaillard, who was a practising physician in that district, and a man of marked ability. The family was of Huguenot extraction, and had been prominent in South Carolina for two hundred years. Losing his father at the tender age of seven, he was reared in great measure in the beautiful and luxurious home of his uncle and guardian, Mr. Sims White, of St. John's parish. Here his education was thoroughly and carefully conducted under tutors, and with the supervision of his uncle, who took great delight in the study of the classics, and much interest in the progress of his nephew.

At fourteen he was prepared for college, but his mother felt that he was too young to be exposed to the temptations of a college life, away from the restraining influences of home. She would not consent to her son entering college until he was fifteen, and the result proved her to be correct, for he only studied at college enough to escape being "found deficient." He had five room-mates, and when it is stated that four of them filled the untimely grave of the dissipated, enough will have been said to indicate the course of life upon which they were then entering, with light hearts, and gay and thoughtless energy. They had their dogs and guns, their routine of champagne and wine suppers, unlimited credit and boyish recklessness.

In after life, Dr. Gaillard often said that his escape from absolute ruin, under these circumstances of danger and temptation, was little short of a miracle. His mother paid all his expenses, and supplied him amply with pocket money; and this, of course, only served to increase the danger with which he was surrounded. If literary attainment was the sole object of college training, his career there would have been a failure; but in point of fact, so far as Dr. Gaillard was concerned, this early conviviality, and the perfect abandonment of himself to amusement, was of the greatest possible benefit to him. It was so, because the gravity of his real nature soon reasserted itself, and if he had never enjoyed these days of thoughtless extravagance at college he would have missed the power of sympathy and compassion, and even tender charity, for the weaknesses of others, which afterwards became to him an element of strength in dealing with large classes of men.

This was specially true in regard to the medical students, who for many years assembled in hundreds to benefit by his teachings. They have often testified that, while he commanded their deepest respect by his high and lofty character, they were never afraid to confide in him their troubles, and even their youthful peccadilloes, sure always of his wise counsel and kind assistance.

Dr. Gaillard's father, having led a very laborious life as a country practitioner, was strongly opposed to the idea of his son following in his footsteps ; and this known wish of his father deterred Dr. Gaillard from choosing the profession of medicine as soon as he had graduated at the S. C. University. He turned his attention to general literature, and bound himself to a routine of study which covered 100 pages a day. The only deviation from this arduous study which he ever allowed himself was a deviation in the size of the pages. His mother was living near Winnsboro then, for the education of her daughters, and Dr. Gaillard began to read medicine under Dr. T. T. Robertson, of that place. He read diligently, but always under the conviction that he was not preparing himself for practice. He formed a deep attachment to his preceptor, which he preserved without change to the last. No praises were so gratifying to him, and no endorsement of his actions so much valued, as those of his dear old preceptor and friend, Dr. T. T. Robertson, of Winnsboro.

About this time his mother sustained heavy financial losses, and lost also her second daughter. The death of this sister was a deep and lasting grief to Dr. Gaillard. There had existed between them more than the ordinary relations of sister and brother. They were bound together by strongest cords of sympathy, congeniality and highest aspiration. He was completely prostrated by her death, and Dr. Robertson advised his mother to take him to New York for complete change of scene. This was his first visit to New York, and but for an unforeseen circumstance he would, at that time, have become a resident of New York. He had made up his mind to remain there, had rented a house and declared his resolution of living there, when he went back to South Carolina to settle up the remainder of his mother's estate. On this visit to his early home he was deeply touched by the sad reversal of fortune which had befallen his much-loved uncle, Mr. Sims White, and he could not carry out his determination to leave the State and the neighborhood, and ignore the possibility of being of use to his mother's brother. He turned the full force of his youthful vigor and enthusiasm into his uncle's affairs, but with no result which could avert the ruin, which seemed inevitable.

After becoming very much involved in this financial loss, his thoughts were once more directed to the study of medicine. The family at this time were living on their beautiful plantation on Cooper River, "The Sportsman's Retreat." One day a young kinsman came to pay them a visit; came crowned with honors from the Charleston Medical College—Dr. T. Gaillard Thomas, who had just graduated at the head of his class. Dr. Gaillard, who was then quietly planting and devoting his leisure to general study, felt from that moment an overwhelming ambition to graduate in medicine, and he called his mother aside and said to her that he intended to begin again the study of medicine, in order to be able to place in her hands the first-honor prize.

From this moment his whole life was devoted to the fulfillment of this intention. He studied arduously, day and night, taking every private class and refusing every invitation for social relaxation from friends and relations. He graduated at the Medical College of South Carolina in December, 1854, and fulfilled the promise of placing the first-honor cup in the hands of his mother.

He wished then that he could have remained in his home in South Carolina, and to have continued his life as a planter; but such a fine offer was made to him from Florida that he did not feel that it could be refused. A prominent physician having died in the vicinity of Palatka, the most influential gentlemen of the neighborhood held a meeting, and invited Dr. Gaillard to remove to Florida, guaranteeing him $3,000 a year. He accepted the offer, and bade farewell to the beautiful home which he was never to see again.

His success in Florida was all that had been pictured to him. He was elected Vice-President of the Florida State Medical Society, and also the Annual Orator, and his practice was large and remunerative. After practising in Florida for two years, he was seized with congestive fever, and was so ill that he was carried out of the State in a nearly dying condition, but returned as soon as he felt that he could resume his work. Additional months of country practice, however, reduced him to such a wretched state of health that he was obliged to abandon the practice of medicine in Florida. His whole system was filled with malaria. Those unhappily familiar with this disease of many phases, this enervating, undermining, almost invincible, life destroyer, can easily conceive what he suffered. His whole nervous system was involved, and it was not until he had traveled for months, both at home and abroad, that his complete restoration to health was made. In 1856 he had married Jane Marshall Thomas, sister of Dr. T. Gaillard Thomas, and she, unhappily, died, after a brief period of married life. This was the saddest portion of a life which contained many vicissitudes and many reversals of fortune. He lost, in the space of two years, his wife, his mother, and a sister who was peculiarly dear to him. It was with a feeling of relief that he turned his back upon his northern home and began his journey southward. He remained in Baltimore two months, and when he saw that an armed struggle was inevitable he went to Richmond, where the Confederate Government had established its headquarters. At this time he was in perfect health, thoroughly fired with the enthusiasm which was so widespread and all engrossing in the South. He was full of energy and mental vigor, and displayed remarkable talent and ability.

He was appointed Assistant Surgeon, First Maryland Regiment, May, 1861; Surgeon same regiment, August, 1861; Surgeon of Brigade, August, 1861; Medical Inspector of Army of Northern Virginia, September, 1861; and Medical Director of the Second Corps of that Army, October, 1861; then commanded by General G. W. Smith. Dr. Gaillard continued to be Medical Director of General Smith's various commands until the battle of Seven Pines, May 31st, 1862. The following extract is taken from General Smith's official report of that battle, dated June 23rd, 1862:

"Surgeon E. S. Gaillard, Medical Director of my command, extracted the ball from General Hampton's wound, under the close and heavy fire of the enemy. His horse was shot under him just before he dismounted to perform the operation. In a few minutes he rejoined me, and was almost immediately afterward severely wounded in the right arm, which had to be amputated. This misfortune, whilst it deprived the army of his services as a practical operating surgeon, will in nowise diminish his usefulness in the higher position which he has so long and so ably filled in my command, that of Medical Director of the Second Corps, Army of the Potomac, afterwards of the District of Aquia, and later of the left wing of the Army. With acknowledged skill of the very highest order in his profession, he has few if any equals as an administrative and executive medical officer of the army. His perfect self-possession, coolness, manly bearing and efficiency upon the immediate field of action, encouraged and cheered all who saw him. I earnestly recommend him to the General Commanding the Army, and to the Government for their highest consideration."

On the recommendation of Dr. Gaillard and of General Hampton, and the strong approval of General Whiting, who was then commanding General G. W. Smith's division, the latter appointed Dr. John T. Darby, Acting Chief Surgeon of that division and acting Medical Director of the left wing of the army. Dr. Darby was at that time the Junior Brigade Surgeon of General Smith's command. The duties of the position he was selected to perform were of so important a character that all consideration of relative rank was disregarded in favor of eminent fitness. The actual rank of medical officers was not disturbed thereby. Dr. Darby, as an officer of General Smith's staff, spoke only with the delegated authority of his chief. The very efficient and highly creditable Manner in which Dr. Darby performed the duties of this position more than justified Dr. Gaillard's judgment.

In a letter dated the 19th of September, 1862, addressed to General R. E. Lee, General G. W. Smith says: "The Secretary of War has appointed Dr. E. S. Gaillard Medical Director of my command, and has placed the General Hospitals (in Virginia and North Carolina) under my control. The authority heretofore exercised by General Winder and a

Medical Board in regard to discharges and furloughs is withdrawn from them and conferred upon me and the medical officers under me." General Smith's command at that time included the State of North Carolina and that part of Virginia which was south of the line of General Lee's active operations, with headquarters in Richmond. It was soon found that a proper discharge of the duties of Medical Director of this command required that his authority should be extended over the general hospitals, embracing sick and wounded from nearly all the Confederate armies. These hospitals had, to a great extent, accumulated in Richmond, and were badly overcrowded, as well as misplaced. Under the authority of the Secretary of War, as above indicated, Dr. Gaillard, in a very short time, located the general hospitals in salubrious districts, relieved Richmond, improved the condition of the sick and wounded, thereby materially adding to the efficiency of the armies in the field. He continued to be the Chief Medical Officer of General G. W. Smith's command until the latter resigned from the Confederate Army, in February, 1863. He was then invalided for three months, and, on reporting for duty, was made Medical Inspector of Hospital Department of Virginia, April, 1863, and, by the Secretary of War, appointed General Inspector of Hospitals, December, 1863, in which position he served until the close of the war, respected and admired by all who knew him in the army.

When the war was over, and the various soldiers of the scattered commands were returning to their homes from the unhappy scenes of their recent defeat and overthrow, Dr. Gaillard was on inspection duty in North Carolina. He made his way to Richmond, which he found a striking contrast to the gay capital he had left but a few weeks before. The city seemed stricken with a mortal illness. Streets which had been crowded with soldiers, and alive with the thousand industries necessitated by the times, were now silent and deserted. Citizens with grief-stricken countenances, meeting in these dreary ways, would ask each other with tones of despair what were their plans, and how they intended to begin again the battle of life. Heroes in the strife they had been—could they now show qualities even nobler, and bear with cheerful and resigned patience the extreme poverty which was to be their portion? This was their task, and when Dr. Gaillard returned to Richmond in May, 1865, he had formed no plans for his future whatever. He took an office which had been made vacant by the death of Dr. Ch. Bell Gibson, and then the full force of his unfortunate position was realized. The loss of his right arm rendered him unable to practice his profession to any but the most limited extent. Applying for the Chair of Practice in the Virginia Medical College, the appointment was given to another, as the trustees thought that a man with but one arm would be at a disadvantage in a practical Chair. They, however, paid him the compliment of creating for him the Chair of General Pathology and Pathological Anatomy, but this was not until a year later. In the meantime he had determined to publish a medical journal. His literary tastes, industrious habits and facility of expression, rendered this work peculiarly agreeable to him, while his extensive acquaintance with physicians in every section of the South and Southwest gave him the chance of securing a large subscription list certainly never enjoyed before by any other editor of a medical journal. He never could have established it, however, but for the generous help of Dr. W. S. McChesney, of Staunton, Va., who, with more enthusiasm than business knowledge, agreed to become full partner in the enterprise, contributing eighteen hundred dollars a year as an offset to the editorial work which Dr. Gaillard was to furnish. As Dr. McChesney was thus severely strained for the support of an enterprise which could not in the beginning repay him, he withdrew from the partnership in 1867.

The first great obstacle in the publication of the JOURNAL was the lack of original material, and Dr. Gaillard to meet this want published, in serial form, first his essay on "Ozone," which had received the Fiske Fund prize in 1861, and then his essay on "Diphtheria," which received the prize of the Georgia Medical Association in 1865.

In May, 1868, he was induced to move to Louisville, Ky., by the offer of the Chair of General Pathology and Pathological Anatomy in the Kentucky School of Medicine. He was assured that the emoluments from the school would be not less than eight hundred dollars a session. At the same time the Kentucky State Society, by special vote, invited him to bring the JOURNAL to Kentucky, and promised it the support of the society.

Dr. Gaillard accepted the invitations and moved the JOURNAL to Kentucky, calling it then "The Richmond and Louisville Medical Journal." He found the Kentucky School of Medicine in a very critical condition, and instead of receiving an increase of income from his connection with it, he rendered himself liable for its debts. The profession in Louisville was divided into many cliques, all either actively or secretly at war with the others. Arriving there quite unprepared for such a state of affairs, it was long before he could discriminate between friends and foes. Having no conception of any method of advocating a cause except the one straightforward, openly-declared course, he fell an easy victim to the secret, intangible, dark and unprincipled machinations of the men who had become his enemies, because he was to give strength to the medical school they wished to suppress.

Their first effort was to detach him from the Kentucky School, and he was offered a professorship in the University of Louisville before he had been in the city but a few months. If he had accepted this offer, his life in Louisville would have been very different; but he felt that in accepting the Chair in the Kentucky School he had identified his fortunes with that institution, and that his honor required him to remain faithful to it.

He was appointed to the Chair of Principles and Practice of Medicine in the Louisville Medical College in 1869, and soon afterwards was elected Dean of the school. At the reorganization of the Kentucky

School of Medicine he was appointed to the Chair of Principles and Practice of Medicine, and also elected Dean of the Faculty.

He thus delivered two entire courses of lectures each year. He was always in favor of high fees for the Western colleges, and when he attended the meeting of the American Medical Association which met in New Orleans in 1870, he advocated the raising of the College fees in the West so strongly that all of the members of the College Association pledged themselves and their colleges to sustain the $120 fee. He returned to Louisville believing that he had achieved a great triumph. The Louisville Medical College advertised to teach for $120, but when the catalogues of the other Western colleges were issued, they announced that the fees were some $50, some $60 and some $75.

This breach of faith on the part of the colleges rendered competition impossible. The two medical schools of which Dr. Gaillard was Dean determined to retain their high fees, but to inaugurate a Beneficiary system to meet the emergency.

This explanation is considered necessary, as many physicians in every section misunderstood Dr. Gaillard's advocacy of the Beneficiary system. He never gave up the hope of raising the fees of the Western colleges, and considered the Beneficiary system only a temporary policy by which the colleges under his care could compete for the time with other Western schools. He defended this policy with all the energy of his strong and determined mind. He thought it was a right and expedient policy, and in this he differed from many of his sincerest friends ; but while this difference caused him deep regret, it could not affect his predetermined course. In July, 1874, he established a weekly journal which he called the "American Medical Weekly," which he published until his severe illness in 1879 compelled him to resign his editorial work for a year into other hands. This illness came upon him when he was doing an enormous work : Dean of two colleges, Professor of the Practice of Medicine in two schools, editor of two entirely distinct medical journals : he wrote and studied until far into the night, while at five o'clock in the morning he would begin his day's work by reading by gas-light in bed. It was while working in this way that his old enemy, malarial fever, attacked him once more, and with the same result. His health was completely wrecked by constant high fever, and by every conceivable phase of the dreadful disease.

He sought relief in traveling, spending one summer in Danville, Ky., and one at the White Sulphur Springs, W. Va. The climate of Louisville being malarial, he was exceedingly averse to returning there, and decided to go to New York from the White Sulphur instead of to Louisville. He reached New York in September, 1879, still a very sick man, and he experienced no real relief, although the best physicians expended much thought and care upon his case, until he was operated on by Dr. Hammond for abscess of the liver.

From this time he began to recover, and his recovery, though slow, was complete, and his health became perfectly good. He never had another symptom of malaria. He devoted his whole time to the conduct and improvement of his JOURNAL. He fondly hoped to give it such a position as to render it a valuable heritage for his children, and he often spoke and wrote of his eldest son as the "Junior Editor." His life from this time forth was spent between the busy routine of his office, the quiet hours of study and writing in his country home, and the relaxations of family life. The little group around his fireside, where all his happiness was found, were daily learning to appreciate him more and more highly, as they were better able to understand him.

When the end came at last, it was very sudden. His family and physicians had scarcely realized that he was ill before he was no more. Beginning with an ordinary attack of neuralgia in his arm, from which he frequently suffered, he was given morphine hypodermically for the relief of the pain. This nauseated him to such an extent that he could not retain the slightest nourishment, and when at last he could retain beef tea or milk, he was utterly worn out with continuous and obstinate hiccough. Fever was present from the first. It left him towards daylight on Monday morning, February 2nd, and he quietly fell asleep to wake no more in this world. He was not conscious of the near approach of death, and his end was without pain. He was sick but six days.

He left a wife, one daughter and five sons. He had married in October, 1865, Mary Elizabeth, daughter of Dr. Charles Bell Gibson, of Richmond, Va. Their eldest child is a daughter, Ellen Eyre. The boys all bear the names of physicians: Edwin White; Charles Bell Gibson; William Gibson; Marion Sims; Frank Paschal. There was one exception to this in the infant son who died at the tender age of four months, and who bore the name of Dr. Gaillard's military chief and close personal friend, General Gustavus W. Smith.

The following eloquent summary of his character as a journalist, from the pen of an esteemed medical friend, is appended with pleasure:

"He showed strength and character in his editorials by his courageous advocacy of what he believed to be the right; by his earnest desire to elevate the medical profession, and to place it upon a higher plane; by his severe criticism of sham, no matter where found; by his suggestive originality; by his courtesy to those with whom he differed in matters of opinion; by his independence and courage; by his mental activity; by his gentleness; by his being no time-server; by his influence being always exerted for good; by his suffering as a martyr for the truth; by the breadth and scope of his views. If such qualities in a man do not constitute a fine character, where shall we look for one?"

It only remains to be added that Dr. Gaillard was a sincere and thoughtful Christian, and that he died in the full enjoyment of that faith, hope and charity which in life had given consolation to his most sorrowful moments, and a higher joy to his happiest.

# PHARMACY AND THERAPEUTICS.

## A COMPARISON OF WEIGHTS, MEASURES, ETC., PREPARED BY REQUEST FOR CONVENIENCE OF READERS.

### FRENCH WEIGHTS IN TROY WEIGHTS.

| | | | |
|---|---|---|---|
| 1 milligramme | equal to | 1-65th | grain. |
| 1 centigramme | “ | 1-6th | “ |
| 1 decigramme | “ | 1½ | grains. |
| 1 gramme | “ | 15 | “ |
| 1 decagramme | “ | 150 | “ |
| 1 hectogramme | “ | 1,465 | “ |
| 1 kilogramme | “ | 14,720 | “ |
| 1 myriagramme | “ | 145,824 | “ |

### FRENCH MEASURES OF LENGTH IN ENGLISH MEASURES OF LENGTH.

| | | | |
|---|---|---|---|
| 1 millimetre | equal to | 1-1,000th | metre. |
| 1 centimetre | “ | 1-100th | “ |
| 1 decimetre | “ | 1-10th | “ |
| 1 metre | “ | 39 37-100th | inches. |
| 1 decametre | “ | 10 | metres. |
| 1 hectometre | “ | 100 | “ |
| 1 kilometre | “ | 1,000 | “ |
| 1 myriametre | “ | 10,000 | “ |

### FRENCH MEASURES OF CAPACITY IN ENGLISH MEASURES OF CAPACITY.

| | | | | |
|---|---|---|---|---|
| 1 millilitre | equal to | 15 | troy grains | water. |
| 1 centilitre | “ | 150 | “ | “ |
| 1 decilitre | “ | 1,500 | “ | “ |
| 1 litre | “ | (1 qt.) 15,000 | “ | “ |
| 1 decalitre | “ | 150,000 | “ | “ |
| 1 hectolitre | “ | 1,150,000 | “ | “ |

Note.—1 grain troy is equal to 1 and 8-100ths grains in apothecary's weight.

### TEMPERATURE AND WEIGHT.

| | |
|---|---|
| 1 lb. water at 60 deg. F. | equal to 79-100ths pint, or 6,067 22-100ths minims. |
| 1 oz. “ “ | equal to 1 5-100ths fl. oz., or 505 60-100ths minims. |
| 1 gr. “ “ | equal to 1 5-100ths minims. |
| 1 fl. drachm water at 60 deg. F. | 56 96-100ths grains. |
| 1 fl. oz. “ “ | 455 69-100ths “ |
| 1 fl. gallon “ “ | 231 cubic inches. |
| 1 fl. pint “ “ | 28 87-100 “ |

### TEMPERATURES.

Centigrade.—To convert Centigrade (C.) or Celsius to Fahrenheit—multiply by 9, divide by 5, and add 32. Thus: 40 deg. C. multiplied by 9 equal 360 deg.; divide by 5, equal 72 deg.; add 32, equal 104 deg. F.

Reaumur.—To convert Reaumur (R.) to Fahrenheit—multiply by 9, divide by 4, and add 32. Thus 40 deg. R. multiplied by 9 equal 360 deg.; divide by 4, equal 90; add 32, equal 112 deg. F.

### PERCENTAGE OF ALCOHOL IN WINES, LIQUORS ALES, ETC.

Strong Port 25, Madeira 24, Sherry 19, Malaga 17, Brandy 53, Rum 53, Gin 51. Whiskey 52 to 54, Burgundy 14, Sauterne 14, Champagne 12 to 14. Tokaya 9, Rudesheimer 10, Catawba 8 to 10, Cider 6 to 9, Mead 7, Burton Ale 8, Scotch Ale 6, Brown Stout 6, Porter 4, Strong Claret 17, Chateau Latour 9, Hock 9 to 12, Lachryma Christi 19, Vin Ordinaire 10.

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## Modern Progress in Materia Medica and Therapeutics. Read before the N. Y. State Medical Association, at the first annual meeting, Brooklyn, N. Y. By E. R. Squibb, M.D.

Twenty-five years' experience in supplying a small part of the medical profession with some of the established articles of the materia medica suggests a retrospect of what has appeared to be the progress made in the remedies used and the use of remedies in the treatment of disease.

The very large and important modern progress in the discovery and application of new remedies, and the improved views and processes of the books and journals are not to be considered here, but only the elements of that slow and substantial progress made among that class of close observers, scattered all over the nation, who learn most and improve most on their own observations and experience, who read much, but rarely write, and are rarely seen in the medical societies, and whose progress, therefore, has to be inferred from the use of the materials they employ in the practice of their art. The number of those who are quite outside of the medical organizations, or who are simply enrolled without taking any active part, is very large indeed, and their value and influence in the profession is very great, and is generally conservative and good.

From a pretty close association with some of this class in all parts of the country, through their correspondence and a certain familiarity with their wants in the materia medica, when not prompted by the ubiquitous drummer and his wares, the following points of progress are either indicated by facts, or inferred from collateral circumstances; and the points are made here, in the loose form of reference, not simply nor principally as a retrospect of the past. but as being of much more importance in the progress of the future.

That is, modern progress is taking in the sense of learning from the advancement of the near past what to work for and look for in the near future.

First, the thoughtful physician seems more to realize the fact that his success as an individual, as well as the success of his profession, depends upon his real utility to the public. As the age grows more and more utilitarian, so the profession has answered and must answer to this progress. The demands of the public upon the medical profession are that disease be prevented as far as practicable; be successfully managed when it comes, and that its damages be skilfully repaired; and in proportion as these demands are rationally and successfully met will be the standing of the individual and the profession to which he belongs.

This public, though much interested in abstruse researches and ingenious speculations and theories of health and disease, is only entertained or amused by them and the profession not only gets little substantial credit for them, but often has them turned against it in ridicule. All this is becoming better understood and realized, and the physician is looking more and more carefully, not only for knowledge, but for the means of applying it. He makes the accurate investigation of disease, but does not rest there, but tries to control the abnormal conditions found. Much less is heard of expectancy; much less of "Young Physic," than formerly. Active agencies carefully studied and skilfully used are much more common now, and the search after such agencies is even becoming hurtfully keen, so that there is danger of the opposite extreme from the former expectancy.

Instances might easily be given of individuals of no uncommon attainments or opportunities, gifted with neither the polished manners nor liberal morals which so often contribute to one kind of success, but fairly equipped with the known means of controlling disease, who, often in frontier populations, within five or ten years, show to the communities in which they work the utilitarian value of a doctor, and through him of his profession also. Success to his community means success to him and to his profession at large. And the success which begins in the actual results of his skill and labor in his community endures and increases just in proportion to its utilitarian character. Thermometers, urinometers, litmus paper, test-tubes and a few reagents, are always found in the orders of such physicians, and plain microscopes, and even sphygmographs, occasionally. Their materia medica proper is commonly simple, the articles not numerous, but effective, and rarely outside of the Pharmacopœia, and their orders for the newest and best advertised remedies are often conditional, always in very small quantities, and as a general rule not repeated.

Few will doubt the dependence of the profession for success upon its utility to the public, and very much of this utility must always depend upon therapeutics, and this, in turn, upon the materia medica. Hence, if there be a progress in materia medica and therapeutics, it is an improvement of the very foundation upon which the medical profession rests, and its importance in the future can hardly be overestimated.

Another important reformation that appears to have been slowly and steadily going on in the near past is in the value of the word cure. The old idea of specific or particular diseases and specific cures seems to have undergone considerable modification for the better, not only in the intelligent portion of the people, but also in the medical profession. That diseases are all so many definite entities, for each of which there is a special cure or antidote, if it could only be discovered; and that incurable diseases are only those for which cures have not yet been discovered, but for which they may be discovered at any time, is a doctrine which common education in the sciences is steadily bringing into a newer and truer light. Many physicians successfully treat disease, if not diseases, but very few undertake cures. Neither do intelligent persons call physicians with the unmodified idea of being cured. But they rather seek for skilled advice, and submit themselves with more or less confidence to be so controlled that they may have the best chances of speedy recovery. And when well, they are not so often, in their own language, and still more rarely in that of the physician, cured, but have simply recovered.

Modern progress seems to indicate that the farther both the public and the profession get away from the old meaning of this word cure the better, for when it is properly understood in the modern light of cause and effect much complex, indiscriminate drugging will be saved, and the dealers in cures—from corn cures to cancer cures—will have their mercantile enterprises better understood. If modern therapeutics is coming to have less and less to do with cures, in the old acceptation of the word, then materia medica is surely equally progressive, for there are probably hardly any now who believe in the possibility that any drug should cure any disease, and therefore it is doubtful now whether there be much chance left, in the profession of medicine at least, for repetitions of the episodes of Cundurango, Missisquoi water and mud, and Chian turpentine. But as the doctrine of cures disappears, the utility and certainty of remedial agents become better established, so that the modern progress is attained in both directions.

Another element in the progress of the near past is a gradual and steady emancipation from the trammels of arbitrary doses of medicines. Physicians are no longer satisfied now with the doses given in the books. With increasing knowledge and broader views they now look for effects, and the time is, perhaps, not far off when the only use of stated doses of medicine will be to know what quantity to begin with. It has come to be very commonly recognized that different persons, and even different conditions of the same person, are very differently susceptible to the action of medicines, and that within certain limits quantities must be adjusted almost to each individual case. In three successive cases of confirmed epilepsy in adults, the number of seizures were not sensibly reduced short of 100 grains of bromide of potassium a day in one case, 160 grains in a second, and 240 grains in the third case, and these quantities produced only moderate bromism. Had the doses of the standard books been adhered to, two out of the three cases would have been unimproved by the medicine.

There are cases wherein the ringing in the ears will be caused by two grains of sulphate of quinine, and there are others which require sixty grains to give this sign of saturation, and there are persons in whom different quantities are required at different times. To treat a recurring malarial fever without recognizing these facts is to fail of success, and discredit both the physician and the medicine, in a considerable number of the most difficult cases, where most credit is to be gained. Dr. William H. Van Buren, more than twenty-five years ago, emphasized this liability to be trammeled by arbitrary doses. In the treatment of consecutive syphilis he found a number of cases recovered under the use of 40 grains of iodide of potassium a day. But others were not impressed by less than 100 grains a day, while a few required 480 grains a day to give similar results. His teaching, and that of others who followed him, applying the same principle to other agents, have done much for the modern progress in this important matter of doses, for it is generally realized now among the best therapeutists that no remedy can be properly considered as having failed until it has been pushed to a physiological or a pathological effect.

There has also been a very important progress made in the knowledge obtained and applied in scrutinizing the quality of medicines, and that has resulted in the production of a better class of medicinal agents than was ever before attained. And it is of no small advantage to have learned that this close scrutiny and discrimination by individuals throughout the length and breadth of the land is far the most effective way of checking adulteration, and the mismanagement or carelessness, ignorance and cupidity in the vending of medical supplies. Year by year more physicians realize the fact that the drummer is not their safest dependence, drum he never so wisely, and they listen to his voice and take his samples more warily, trusting rather in their own ability to judge of the agents which are so important to them and their patients.

Every year more Pharmacopœias are sold, and more physicians confine themselves mainly within its scope, and more tests and reagents are used; and now that the Pharmacopœia has a full set of officinal test-solutions, it may be confidently expected that still more physicians and pharmacists will learn to apply them in this important interest of effective medicinal agents. All physicians who want to know it, know now that it is not the writing of papers on adulterations, nor the resolutions of societies so much as the individual knowledge, care and watchfulness of each physician for himself that secures to him the character of his supplies. It has always been the case that good supplies could be easily obtained by proper care and scrutiny, but it has never been so easy as it is now in consequence of the general improvement in the quality of supplies, and the wider market for selection.

Moderately good and poor qualities are as plentiful and as cheap as ever, but the physician, having learned that cheap labor supplies is poor economy, is upon his guard if he desires to be. He has also learned that high-priced supplies are not always the best, and hence his safety only in his own testing processes, and in avoiding complex remedies and forms of medicine which it is difficult or impossible to test.

Another element of progress notable within the past few years is that physicians use fewer and more active agents and use them more simply. The time for complex prescriptions, and of using several agents at one time, seems to be passing away, and physicians do not go from one preparation to another so easily as heretofore. The using of a few definite agents, and knowing from personal observation just what they will do, is of such manifest advantage that it would be strange indeed if there was no progress here. Physicians' orders, from being long, and embracing many doubtful and indefinite articles, and many duplicates, or articles used for similar purposes, are now short and compact in the main. Ten to fifteen standard medicines at a time is about all an ordinary physician wants, and this about twice or thrice a year keeps up a supply of not over double that number of agents in all for common daily use. This enables him to watch the qualities better, and keep his stock fresh and in the most efficient condition.

Much progress has also been made in using more concentrated forms of medicines. Decoctions, infusions, vinegars and wines have almost gone out of use, while tinctures and syrups are steadily falling into disuse, though not as rapidly as they deserve. These are all replaced by the far more accurate and convenient fluid extracts, with their small and effective doses, which can be so easily administered in so many different ways. Thus the physician and pharmacist, instead of having to keep two or three preparations of the same drug to get stale on his shelves, has to keep only one, and this the best and most accurate one.

Much has been gained in the precision with which medicines are measured for administration, and the measuring apparatus has been much extended and much improved in accuracy, so that it is not difficult now to get fairly accurate weights and measures at a reasonable cost.

The many and great advantages in the use of the salts of a few alkaloids have led to the extreme of seeking to extract and use the active principles of drugs, instead of the preparations of the drug, in all possible cases, and there are many excellent reasons for this if it were only practicable. Unfortunately, the so-called active principles rarely represent the drug from which they are taken either fully or fairly, and are of such variable strength that they are less trustworthy than the drug. Beside this, many of the alkaloids and nearly all the glucosides are so loose in their molecular structure that they split up and become partially or wholly inert without change in appearance, and under circumstances that are not known. Physicians who examine most closely into the character and processes of extraction of many, if not most of these so-called active principles, will see that they are frequently the result of the chemistry applied for their extraction, and that they do not pre-exist in the drug, and therefore can only partially represent it.

Finally, perhaps the greatest process of all has been in the power and definiteness of the agents used, and in judging of the manner and effect of using them. Many years ago, when among the first of these very definite and powerful agents, the American hellebore, came into use for controlling the action of the heart, it was objected that its use was merely controlling a symptom of disease without going to the root of the matter at all. The pneumonia went on all the same, and perhaps the depressing action of the drug was simply added to the depressing action of the inflammation, and harm rather than good might rationally result. It took some time to show by actual experience that the drug could be given in controlling quantities without more depression than was needed in a sthenic disease, and that the lowering of the pulse rate by fifteen or twenty per cent. meant the sending of fifteen to twenty per cent. less of blood through an inflamed, congested and oppressed organ, whose obstructed functions were threatening life, and therefore that treating this pulse symptom was really treating the whole of the disease by controlling its prominent element. It was thus clearly recognizable that by subtracting one prominent element or symptom from a group which constitute a disease the bond is broken, and it then tends to disintegration, just as when an atom or a group of atoms is subtracted from a molecule, it splits up and loses its identity and its reactions.

Then, when bromide of potassium was successful in controlling the seizures of epilepsy, it was objected that it merely controlled the expression of the diseased condition, without affecting that condition, since when the medicine was omitted, or was used in too small quantity, the seizures would recur. But in the progress made in the near past it has been abundantly shown that when the bromide is skilfully managed and continued through a long time, with great perseverance and care, for a sufficient length of time after the attacks have ceased, many patients are no longer in the condition which caused the attacks, and that thus in treating the principal symptom the condition causing it has also been treated successfully.

Again, in those agents which simply reduce temperature. Take, for example, the use of salicylate in acute rheumatism, the effect is to control one symptom primarily, but it happens that through the close relationship of symptoms two others of equal importance are also controlled, namely, the pain and swelling. It is maintained that the disease goes on and commonly runs its course; but it is admitted that it is occasionally cut short, and that it is almost always rendered comparatively free from high fever, pain and swelling ; that heart damage is less frequent and less serious, and that relapses occur less frequently.

It is needless to multiply examples to show that great progress has been made in the acquisition of definite agents and in the knowledge of how to use them, and should the next ten or twenty years prove as fertile in the resources of the medical art as is indicated by the progress of the past, the profession will occupy a much higher position in the estimation of the public than it now does.

It should not be inferred from the above that all the prominent changes in relation to the materia medica within the past few years have been improvements, or for the good of either the profession or the public ; for much doubtful medication has grown into common use among large numbers of physicians, who do not seem to stop to think where the mercantile enterprise of the manufacturer is carrying them.

WARBURG'S TINCTURE FORMULA.—

| | |
|---|---|
| ℞. Rad. rhei, p. aloe soc., rad angelica officinalis, *aa* | ℥ iv. |
| Rad. Helenii, crocus Hispan, sem. fœniculi, creta preparat., *aa* | ℥ ij. |
| Rad. gentian, rad. zedoar, p. cubeb, g. myrrhæ, g. camphor, boletus laricis, *aa* | ℥ i. |
| Confect. damocratis* | ℥ iv. |
| Quiniæ sulph. | ʒ lxxxij. |
| Sp. vini. rect. | O xx. |
| Aquæ puræ | O xij. |

Macerate in a warm bath twelve hours, express and filter.

* *Confectio Damocratis:*

| | |
|---|---|
| ʒ. Cinnamon | 14 grams. |
| Myrrh | 11 " |
| White agaric, spikenard, ginger, Spanish saffron, treacle, mustard seed, frankincense and Chian turpentine, *aa* | 10 " |
| Camel's hay, costus Arabicus, zeodary, Indian leaf, mace, French lavender, long pepper, seeds of harwort, juice of the rape of Cistus, strained storax, opopanax, strained galbanum, balsam of Gilead, oil of nutmeg, Russian castor, *aa* | 8 " |
| Water germunder, balsam-tree fruit, cubeb, white pepper, seeds of carrot of Crete, Poley mont. strained bdellium, *aa* | 7 " |
| Gentian root, Celtic hard, leaves of dittany of Crete, red rose, seeds of Macedonian parsley, sweet fennel seed, seeds of lesser cardamom, gum Arabic, odium, *aa* | 5 " |
| Sweet flag, wild valerian, anise seed, sagapernum, *aa* | 3 " |
| Spigrul, St. John's wort, juice of acacia, catechu, dried bellies of skunks, *aa* | 2½ " |
| Clarified honey | 915 " |

The roots, etc., to be finely powdered, and the whole mixed thoroughly.

HAZELINE IN MENORRHAGIA.—Mr. M. Chute (*Practitioner*) announces the following as a valuable remedy for menorrhagia, which is a very frequent ailment in Cape Colony: Two drachms of hazeline given twice or thrice a day will act so quickly that to anticipate the flow is unnecessary; but when menstruation, after it has lasted the ordinary time, is not closing naturally, hazeline, given as above, will effectually restrain it, and after hæmorrhage has ceased there is no advantage in continuing the drug. Another good result produced by hazeline is, that it relieves the pain of dysmenorrhœa in a very quick and marked manner.

CHLOROSIS.—The *Medical Press* publishes the following as an excellent pill in chlorisis:

| | |
|---|---|
| ℞. Ferri sulph. | ʒ j. |
| Sodæ bicarb. | ʒ j. |
| Pulv. tragacanth | gr. vj. |
| Syrupi | q. s. |

Divide into forty-eight pills, and let one be taken thrice daily. Later, two may be taken instead of one.

CONTUSED WOUNDS.—It is said (*Med. and Surg. Reporter*) that the application of a decoction of valerian root, an ounce to the pint, often relieves completely the pain of contused wounds.

BORACIC ACID OIL IN THE TREATMENT OF BURNS.—In the *Brit. Med. Jour.*, December 20, 1884, Dr. C. J. Bond says it is now a year since he began to use boracic acid oil as a dressing for burns at the Leicester Infirmary, at first simply in the form of a mechanical suspension of the powdered acid in olive oil. He has found that 18 grains of powdered boracic acid dissolved in a drachm of hot glycerine, and added to an ounce of olive oil, forms a kind of imperfect emulsion, the glycerine retaining the acid in solution when cold. This can be easily shaken up with the oil. This makes a non-irritating and doubly antiseptic dressing, and extensive burns treated thus, and covered with a layer of some antiseptic wool, require to be disturbed but sedom, and if not perfectly aseptic, are far "sweeter" than when dressed with, for instance, the carron oil. As a lubricant for catheters, sounds, etc., this boracic oil with glycerine possesses advantages. It is superior to olive oil, because of its antiseptic property; and better than carbolic oil, because it is less irritating and much more stable, boracic acid being non-volatile. Glycerine itself, too, is a dressing of considerable value by virtue of its dehydrating power.

A NEW ANTISEPTIC DRESSING.—According to Francis, 1 oz. of gelatine is softened in a little cold water, and then dissolved in hot glycerine. To the solution is added 1 per cent. of corrosive sublimate. After cooling, the mixture solidifies to a jelly-like mass, which may be preserved for an indefinite length of time. The wound to be dressed is covered with sublimate gauze (1-5,000), and this is then coated with the warmed gelatine solution. The meshes of the gauze are closed, and the wound is covered, impermeable and antiseptic. Upon the first layer is placed fresh gauze immersed in corrosive sublimate. The gauze is most readily saturated with the gelatine by drawing the dry material through the warm solution. When these saturated strips are placed upon the sublimate gauze, a very quickly applied dressing is obtained. It must be kept in tightly-closed glass vessels.—*Boston Med. Jour.*

PROFESSOR PALMER, of Michigan University, prescribes kousso, which is a most efficient tæniafuge, in the following form:

| | | |
|---|---|---|
| ℞. | Eth. ext. male fern ............................ | ℥ ss. |
| | Pulv. kousso ..................................... | ʒ ij. |
| | Confec. senna. q. s. to make pills ...................... | iij. |

He says that the patient should abstain from food for twelve hours, then take one of these pills every hour, followed by a dose of castor oil.—*Druggists' Circular.*

PRESCRIPTION FOR ALCOHOLISM.—

| | | |
|---|---|---|
| ℞. | Tr. capsici ........................................ | ʒ iij. |
| | Spts. ammon. aromat ............................ | ʒ iij. |
| | Tr. calumbæ ........................................ | ℥ j. |
| | Tr. card. co. ........................................ | ʒ vj. |
| | Aquam ad. ........................................ | ℥ viij. |

M. Fiat mixtura. Sig. A tablespoonful with the same quantity of water every two hours, or when craving for drink comes on.—*Med. Bulletin.*

AMYLASE.—Amylase has been found by M. Brase (*Lancet*) to be present in a very large number of leaves of plants: potato, maize, dahlia, beet, tobacco, castor oil, red poppy and sunflower. The principle is obtained by digesting the bruised leaves in cold water for twenty-four hours; the juice is then expressed and one and a half times its volume of 90° alcohol is added and the liquid filtered. After filtration the same quantity of alcohol is added and the liquid set aside to deposit. The precipitate is filtered off and washed with a small quantity of 65° alcohol. The amylase when present is contained in the precipitate, and its presence is proved by its action in converting starch into sugar.

ROOSEVELT HOSPITAL FORMULÆ.—MIXTURES FOR DYSPEPSIA, ETC.

### *R. & S. Compound.*

℞. Tinct. nux vomica.... ♏v.
Powd. ipecac......... gr. ¼.
Bicarb. soda.......... grs. v.
Powd. rhubarb....... grs. ij.
Peppermint water, s. q. ʒj.
M. Dose, ʒ j.

### *R. & S.*

℞. Powd. rhubarb....... grs. ij.
" bicarb. soda.... grs. v.
" ipecac......... gr. ¼.
Peppermint water.... ʒ ij.
M. Dose, ʒij.

### *Pepsine.*

℞. Saccharat. pepsine.... grs. iij.
Dil. muriat. acid...... ♏iij.
Glycerine........... ♏v.
Water, s. q........... ʒj.
M. Dose, ʒj.

### *Infant Laxative Mixture.*

℞. Nitrate potass........ gr. j.
Sulph. magnes....... grs. v.
Lemon syrup........ ʒ ss.
Water, s. q........... ʒ j.
M. Dose, ʒj. for a child 1 year old.

### *Dyspepsia Mixture.*

℞. Dil. hydrochloric acid. ♏x.
Tinct. nux vomica.... ♏x.
Tinct. cinchona, s. q.. ʒ j.
M. Dose, ʒ j.

### *Colic Mixture.*

℞. Spirit of chloroform.. ♏xx.
Arom. spirit of ammon. ♏xx.
Comp. spirit lavend.. ♏xx.
M. Dose, ʒ j.

### *Rhubarb and Magnesia Mixture.*

℞. Sulph. magnes........ grs. v.
Tinct. rhubarb....... ♏iij.
Syr. ginger.......... ♏x.
Peppermint water, s. q. ʒ j.
M. Dose, ʒj. for a child 1 year old.

### *Castor Oil.*

℞. Castor oil........... ʒ j.
Glycerine............ ʒss.
Ol. cinnamon......... ♏⅛.
M. Dose, ʒ iss.

### *Vinum Gastricum.*

Take one perfectly fresh calf's rennet, cut up into pieces and put in a jar, and pour on one quart of good sherry; do not filter. Dispense supernatant fluid after standing thirty-six hours.

—*Communicated to the Druggists' Circular.*

TOOTHACHE REMEDY.—Melt two parts of spermaceti or wax, and dissolve in it two parts of chloral hydrate, and one part of carbolic acid. Dip pieces of cotton into the mixture and let it cool. For use, detach a small quantity, soften it with a gentle heat, and press it into the hollow tooth.—*Rundsch. f. Pharm.*

LOTION FOR TARTAR ON THE TEETH.—The rational treatment of tartar (*Lancet*) seems to be: (1) its complete removal by suitable instruments, leaving no nuclei for fresh deposits; (2) the use of twenty drops each of glycerine, carbolic acid, and tannin in the water when brushing the teeth, adding a few drops of eau-de-Cologne; (3) the systematic and careful brushing of the insides as well as the outsides of the teeth, and (4) the occasional use of a carbolic tooth-powder, being careful to use plenty of water afterwards, to prevent accumulation of the powder between and around the teeth.

# REVIEWS.

A TREATISE ON INSANITY IN ITS MEDICAL RELATIONS. By W. A. HAMMOND, M.D. New York: D. Appleton & Co. 8vo., pp. 7 7.

INSANITY; ITS CLASSIFICATION, DIAGNOSIS AND TREATMENT. By E. C. SPITZKA, M.D. New York: Bermingham & Co.

INSANITY; ITS CAUSES AND PREVENTION. By HENRY PUTNAM STEARNS, M.D. New York: Putnam's Sons.

As there has been a claim by some persons to the effect that the editor of this journal is censorious, if not unfair, in regard to the alienists of this country, and as he does not profess to be competent to write *ex cathredra* in reference to psychology as this is now construed (however speciously) by those who assume to be its exponents, it is deemed most fair to the authors of these three works, and more just to the readers of this journal, that the reviews presented should be from another source, and one which has been long and justly valued. The following reviews, which are from the pen of a transatlantic reviewer, are certainly important in character, and were regarded as sufficiently valuable to be originally published, as here presented, in the London *Lancet*.—E. S. G.

Dr. Hammond's bulky tome is an interesting addition to the literature of insanity. In the preface the author claims that the term insanity "has hitherto been applied in altogether too limited and illogical a manner," and he would extend it to include all cases of "abnormal manifestations of mind;" but he cannot be said to have carried out this extension in the present work. The first section, on the principles of the physiology and pathology of the mind, is made up of disquisitions on eccentricity, idiosyncrasy, genius, habit, etc., the subjects being taken in no special order, and having no special merit in the mode of setting them forth. The chapters on the nature and seat of instinct are an elaborate compilation of the views of numerous experimentalists and writers, the conclusion being arrived at that instinct "has its chief, if not its only, seat in the medulla oblongata and spinal cord," the faculty being possibly strengthened by the cerebrum, cerebellum and pons Varolii. The voluminous section on sleep is a reproduction, with little originality in grouping, of the stereotyped facts relating to this subject. Arriving at the section devoted to the description and treatment of insanity, two definitions are added to the limbo for the reception of good intentions of this kind. Dr. Hammond abandons his own product in favor of one compounded by Dr. Cruse, viz., "Insanity is a psychic manifestation of brain disease, unattended by loss of consciousness." This has the advantage of being the shortest yet made, and it is to be regretted that every psychic manifestation of brain disease is not insanity. No new book on insanity could be written without adding to the list of classifications; these agree only in the one point of having a class including a large number of forms which will not easily fall in with the general idea of the classification. In the present instance this *omnium gatherum* is represented by a division called "compound insanities," under which heading are found acute mania, secondary dementia, katatonia and general paralysis. The remaining divisions are perceptional, intellectual, emotional, volitional, constitutional and arrest of development. Twice as much space is devoted to katatonia as to epileptic insanity ; this being due to the full report of several cases of this so-called disease. After carefully reading these, considerable hesitation must be felt in regard to accepting katatonia as a distinct form of insanity. The chapter on treatment is perhaps the most interesting in the work, the author starting with the question whether the treatment should be conducted at home or in asylum. This is answered by giving a very decided preference to the family treatment of the insane, especially if the insane person can be placed in the family of a physician. The assertion is made that there are whole classes of the insane who do not need asylum treatment, and foremost amongst these are placed perceptional insanities, comprehending the forms of illusions and hallucinations. Considerable objection might be raised against this statement; these forms alone have assuredly furnished a large number of homicides during the last few years, and the household in which some cases of this kind could be domiciled would require to be very peculiarly constituted. Dr. Hammond declares himself on the side of the "druggists," in addressing medicinal treatment directly to the brain. Hence, bromides, opiates, hyoscyamus, conium, *et hoc genus omne*, would seem to be in favor with him. This is disappointing after noting his full recognition of the efficacy of hygiene and moral influences, and of the relation of bodily disease to mental disorder. The book throughout is carefully written, and the authorities quoted are conscientiously acknowledged. It will, without doubt, add to the reputation of the already well-known author.

Dr. Spitzka's book must be acknowledged to be a valuable addition to the literature of insanity. The author's views are independent, clearly and concisely expressed, and his division and arrangement of the subjects treated of are in some respects an advance on previous methods. The opportunity for progress in this direction is so great that this is but faint praise. The work is disfigured by virulent attacks on American alienists, which are out of place in such a manual. The work is, moreover, very dogmatic in tone, and the generalisations made would often lead to error. Evidence is afforded of considerable experience, and of acuteness of observation, and the author's reading would seem to have been sufficiently extensive to have justified a more liberal quotation of authorities. The definition of insanity is a fearful and wonderful production, occupying nearly half a page. By it, "harmony with surroundings" is made the test of sanity, a test to which few men would care to submit, and which none could satisfy, so that sanity would remain the sole property of the exceptions, viz., states of sleep, trance, coma, etc. American alienists must surely have exclaimed, "Would that our enemy had written a definition of insanity." Dr. Spitzka evidently does not rely on his definition, for he advises that when in a court of law a definition is asked for, the questioner should be challenged to show a broken leg which is not a broken leg. But he does not explain the relation of this to the question of sanity or insanity. Further on, he defines insane delusions as "faulty ideas growing out of perversion or weakening of the logical apparatus." A definition of a "faulty" idea would be acceptable as well as information to enable "perversion or weakening" to be distinguished from normal variation or ageing. In fact, definition does not appear to be the author's *forte.* The classification of insanity is cumbrous, but not without merits. Monomania is apparently the term the author uses to cover the cases which are not easily classifiable. The chapters on this unsatisfactory term are the weakest in the book. Those on general paralysis, on the contrary, are decidedly the best, although by no means exhaustive of the subject. Treatment is very briefly dealt with, but the author would seem to be in accord with the latest views held on this side of the Atlantic. In spite of many defects, the book is suggestive and worthy of perusal by any one interested in mental diseases.

Dr. Stearns' book is somewhat discursive, a quality which may attract lay readers, and so draw popular attention to the causes and prevention of insanity. There is little of original matter in the volume, but the views of the author are generally neatly stated. The ill effects of civilization are chiefly ascribed to the want of community of interest and the development of self-seeking. In education he recommends fewer subjects and fewer pupils, treated with more attention to individuality by better trained masters. The chapter on alcohol gives an opening for the expression of extreme views, especially directed against its moderate use. The pathological statements are such as might be expected at a teetotal meeting. Accepting these and the results of experiments quoted as facts, the whole human race ought from the use of alcohol to have been reduced to a state of idiocy many generations back. The opinion is expressed that the effect of the excessive use of tobacco "is likely to appear in the offspring in the form of a lower grade of intellectual and moral character." Throughout his work the author appears to have more faith in the efficacy of frightening the public into habits of well living by scientific bogies than of an appeal to intelligence and reason.

A MANUAL OF DERMATOLOGY. By A. R. ROBINSON, M.B., L.R.C.P. and S., Edin., Professor of Dermatology at the New York Polyclinic, Professor of Histology and Pathological Anatomy at the Woman's Medical College of the New York Infirmary, Attending Physician to the Demilt Dispensary, Skin Department; Member of the American Dermatological Association, etc. New York: Bermingham & Company. 8vo., pp. 647. Price, $5.

In this work, which is announced as the basis of a larger and more exhaustive one, to appear hereafter, the writer has adopted the classification of Hebra, with such modifications as were rendered necessary to bring it in accord with the present status of dermatological science. The matter contained in it is presented in a lucid and agreeable manner, and it will be found, on the whole, a satisfactory guide to the diagnosis and treatment of diseases of the skin.

A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS. By FRANK HASTINGS HAMILTON, A B., A.M., M.D., LL.D., late Professor of Surgery in Bellevue Medical College and Surgeon to Bellevue Hospital, New York; Consulting Surgeon to Hospital for Ruptured and Crippled, to St. Elizabeth's Hospital, etc.; Author of a Treatise on Military Surgery and Hygiene, a Treatise on the Principles and Practice of Surgery, etc. Seventh American edition, revised and improved. Illustrated with 379 wood-cuts. Philadelphia: Henry C. Lea's Son & Co.

A seventh edition of this great work of Dr. Hamilton's, which is such an honor to American Surgery, and which will unquestionably cause his name to live to all future generations, shows that there is still an active demand for it on the part of the profession. Each new edition has been an improvement on the preceding, and in the present one, which evinces a thorough revision throughout, a very large amount of additional material has been introduced, in order to make it, as it has always aimed to be, a complete exponent of the special subjects of which it treats. As was to be expected of a house with such a world-wide reputation, no pains have been spared by the publishers to render this volume as perfect as possible in all its details.

A COMPEND OF ORGANIC AND MEDICAL CHEMISTRY, INCLUDING URINARY ANALYSIS AND THE EXAMINATION OF WATER FOOD. By HENRY LEFFMANN, M.D., etc. Philadelphia: P. Blakiston & Co. 1884. Price, $1.

This is one of the series of "Quiz Compends" published by the Blakiston's, and it will be found to be an excellent manual for students in posting themselves on organic chemistry in a general way, as well as in making practical analytical investigations.

BACTERIA. By Dr. ANTOINE MAGNIN and GEORGE M. STERNBERG, M.D., F.R.M.S. New York: William Wood & Co. 1884. Pp. 494.

No one can understand the present drift of medical thought without some knowledge of bacteriology, and the writers furnish us with a book which supplies that knowledge in a fairly satisfactory manner; though were a new edition of it to be brought out ten years from now, many material changes would probably be necessary in order to make it an equally acceptable guide then. This work, which is illustrated with photo-micrographs, shows no little labor on the part of its distinguished authors, and is accompanied by a very complete bibliography. The portions devoted to the technology of culture will be welcome to experts, as well as beginners in experimental science, and those relating to germicides and antiseptics can be studied with profit by all.

MEDICAL RHYMES. A collection of rhymes of ye anciente time, and rhymes of ye modern day. To interest, amuse and edify all sorts of followers of Asculapius. By HUGO ERICHSEN. M.D., with introduction by Professor W. P. KING, M.D. Chicago, Ill., and St. Louis. Mo.: J. H. Chambers & Co. 1884.

This novel collection of poems of various merit and interest will be found often extremely interesting, if now and then the verses are dull or overstrained. The palm, of course, is borne off by the genial "Autocrat."

## MISCELLANEOUS.

POISONING BY "ROUGH ON RATS."—Dr. S. T. Day, of Westport, Conn., reports (*New York Medical Journal*) two cases of accidental poisoning by "Rough on Rats," a father and son, with symptoms of the toxic effects of arsenic. Both patients recovered. In order to satisfy himself as to the precise poisonous ingredients in the "Rough on Rats," he wrote to the chemist and proprietor, Mr. E. S. Wells, of Jersey City, asking him to give the names of the poisonous ingredients, and received the following reply: "Jersey City, N. J., December 31, 1884. Dr. L. T. Day. Dear Sir: If you treat as for arsenical poisoning you will hit it, in so far as actual poisoning is concerned. Respectfully, E. S. WELLS." Dr. Day thinks there ought to be a law compelling manufacturers of poisons for general use to print on the label of packages containing such poisons the name or names of the most toxic agents of the compounds, thus enabling physicians to treat cases of poisoning more intelligently and successfully.

THE EMPLOYMENT OF WOMEN AND CHILDREN IN FACTORIES.—A bill has been introduced into the New York Legislature regulating the employment of women and children in manufactories, and creating the office of an inspector to enforce it. It prohibits the employment for more than sixty hours in one week of minors under the age of eighteen years or of women under twenty-one years. It requires an hour's recess at noon, and absolutely prohibits the employment of any child under fourteen years of age. Minors between the ages of fourteen and eighteen must be recorded by name in books kept for the purpose by the employer. A certificate signed by their parents or guardians stating the age and place of birth of such minors must also be kept on file by the employers for exhibition to the inspector or to any officer of a society for the prevention of cruelty to children. Employers must keep posted in their factories copies of the law and lists of the children under eighteen years so employed. No child under the age of sixteen years shall be employed in handling or using any machinery dangerous to life or limb, or in any mining, glass work, rag sorting, mercury, lead, arsenic, or brick works, or in any watch factory, or in the preparation or application of any aniline or other poisonous dyes, or in the manufacture of any explosive substances, or in any place not properly lighted or ventilated. The penalties for violation are a fine of not less than $50 nor more than $100, or not less than eighty nor more than ninety days' imprisonment. Any person who wilfully makes a false statement in any certificate required by the act is guilty of forgery. A manufacturing establishment within the meaning of the act is any place where two or more persons or children are employed. A factory inspector with a salary of $1,000 and three assistants with salaries of $3 per day are to be appointed by the Governor and Senate for a term of three years each. It becomes their duty to visit the workshops and factories of the State to see that the law is enforced, and to report annually to the Bureau of Labor Statistics.

THE HEIGHT OF BUILDINGS.—Another bill lately introduced is one that was presented last year, but not acted upon, regulating the height of buildings hereafter to be erected in the City of New York. It provides that "such height, measured from the sidewalk and taken in all cases through the centre of the façade of the building to be erected, including cornices, attics and mansards, shall not exceed seventy feet upon all streets and avenues not exceeding sixty feet in width, and eighty feet upon all streets and avenues exceeding sixty feet in width." This is the measure which was so strongly advocated by Dr. S. O. Vanderpoel in the report of the Committee on Hygiene of the New York County Medical Society at the annual meeting in 1883, and is founded upon the law existing in Paris, which requires that the height of buildings shall not exceed a certain definite proportion to the width of the street on which they are erected.

ADULTERATION OF CREAM OF TARTAR.—In a report upon the subject of food adulteration made to the New York State Board of Health by Profs. Chandler and Love, it is stated that of 27 samples of cream of tartar bought from dealers as pure 16 were adulterated with various substances from 3 to 93 per cent., while of the remainder all contained tartrate of lime, some as high as 10.59 per cent.

AMERICAN MEDICAL ASSOCIATION: RAILROAD NOTICE.—The Illinois Central Railroad will run an excursion train of Pullman Palace cars from Chicago through to New Orleans without change, for members and other physicians and their families who attend the coming meeting of the American Medical Association, leaving Chicago on Saturday evening at 9 o'clock of April 25, and arriving at the Crescent City on Monday morning at 9 o'clock, the 27th. The rates from Sioux City, Dubuque, Galena, Amboy, Chicago, St. Louis, Bloomington, Centralia, Du Quoin, Cairo, and other points along this line, will be as low as can consistently be made.

AN ACCURATE DIAGNOSIS.—It was reported to the Board of Health of New York that one of the engineers of a European steamer just arrived was suffering from small-pox, but when Dr. Taylor, Chief of the Vaccination Department, visited him, he found that the trouble was an attack of indigestion.

A THREE-EYED DOCTOR.—Odd expressions are sometimes made by authors. In the last *New York Medical Record* a physician mentions that "Dr. Osio lost three eyes by panophthalmitis." Three-eyed medical gentlemen are so scarce in this world that the doctor's mishap takes on the proportion of a public calamity.—*Evening Post.*

DILATATION OF THE CERVIX UTERI.—Dilatation of the uterine cervix to the full extent (one and a quarter to one and a half inches), says the *Weekly Medical Review*, has been done over three hundred times by Dr. Goodell without any death or any case of serious inflammation, and he claims far more satisfactory results than when he used the cutting operation of Sims to cure dysmenorrhœa and sterility. The following is a table giving results of the operation in cases of dysmenorrhœa:

| | | |
|---|---|---|
| Single 80 | Result unknown | 18 |
| | Cured | 38 |
| | Improved | 17 |
| | Not improved | 7 |
| Married 88 | Result unknown | 35 |
| | Cured | 39 |
| | Improved | 10 |
| | Not Improved | 4 |

Of the fifty-three married women in whom the result was known, nine were not in a condition to conceive from various causes; of the other forty-four, eight became pregnant—a little over 18 per cent. He thinks it probable that pregnancy has occurred in some other cases which had not been reported to him.

The Treatment of Delirium Tremens.—In the *Therapeutic Gazette*, January 15, 1885, Dr. E. P. Hurd, of Newburyport, Mass., recommends the following treatment in delirium tremens: A subcutaneous injection of one-half grain of morphia at the inception of the attack, followed by a tablespoonful of the following mixture, which he advises to be repeated every two hours till sleep is induced:

℞. Chloral hyd........................................ ʒ ss.
Tinc. capsici........................................ ℥ ss.
Peppermint water.................................... ʒ vss.
**M.**

He says the quantity of chloral which may be taken with impunity in this disease is considerable—in fact, massive doses are required. When the nervous system has undergone a profound modification, under the influence of one toxic agent, it does not readily respond to another; this is a lesson of which we see repeated illustrations. In some cases of unusual violence he has been obliged to resort to the use of chloroform by inhalation, and where the attack was ushered in by epileptiform convulsions, or where convulsions constituted an epiphenomenon of the disease. He thinks the best means of promoting elimination of alcohol and other noxious effete matters in the blood of a patient who is a victim of this disease is to give plenty of nourishing food, and that common experience testifies to the superiority of meat broths in the majority of cases, these being more likely to agree with the stomach, and being more assimilable. Of the various protein preparations, he continues, there is one which commends itself for its nutritive excellence and easy digestibility—it is a dried powder of beef known as beef peptones (sarco-peptones) and peptonized beef. A dessertspoonful of this powder may be stirred into a cupful of hot water or milk, and the whole taken at one draught, or as much as the condition of the stomach will tolerate. Or strong beef-tea, made from lean beef, may be given instead; a gill every two hours. Johnston's fluid beef is a useful preparation; it is a handy article of diet in the sick-room, and seems to be both more palatable and more nourishing than most of the meat extracts. Theoretically, desiccated blood, as manufactured by Parke, Davis & Co., would seem to be a most useful alimentary product in delirium tremens, where a powerful and easily assimilable nutrient is demanded.

Inoculation in the Treatment of Pannus.—The heroic measure of inoculating gonorrhœal pus for the relief of severe pannus, says the *Medical Record*, has been tried in three cases in the Ophthalmic Division of Charity Hospital, with the following results: First patient, totally blind in both eyes for several years, was inoculated with gonorrhœal pus. He was discharged with vision 10-200, 2-200. Second patient, right eye with white leukoma and partial pannus; vision 6-100, 12-100. Third patient, vision 20-100 in right eye; in left eye, perforated cornea, and perception of a moving object at a distance of two feet. Second and third patients had perception of light in one eye, while with the other each patient could count fingers at the distance of a foot. Both were inoculated with a traumatic urethral discharge, which ceased after a ten days' treatment. The results were so good as to merit further trial, although the procedure is confessedly severe.

The Tallow Tree.—The tallow tree is of Chinese origin. It grows also in the northwest of India, and has been introduced into South Carolina, where it has been cultivated for ten years. It produces a fruit, the core of which is covered with a layer of thick tallow, and contains a yellowish aromatic oil used in the same country as a heating agent. After the plucking, which takes place in July in the south, and in October in the north of China, hot water is poured on them, and the grease is skimmed off, after getting cold, with spoons. The tallow, moulded into the form of bamboo canes, is directly brought into commerce. This tallow presents the appearance of a greenish mass, crystalized, having a peculiar odor.

Action of Copper upon the Human Economy.—MM. A Hules and De Pietra-Santa give an account of Durfort, a village of Tarn, where the workmen pass twelve hours daily in the midst of an atmosphere of copper oxide. Their skins, hair and beards are colored with copper. The same metal can be detected in their secretions and excretions and, after death, in their bones. These people suffer from no special trade disease, and on the other hand they enjoy no special immunity from infectious diseases, and in particular from cholera or typhoid fever.—*Scientific American.*

Fat and Age.—The influence of age on the chemistry of the body is a department of physiology as yet very imperfectly investigated. The composition of the fat, however, at different periods of life, is obviously one of the simplest problems connected with the question, and it has been lately investigated by Lanquer. In newly-born children the fat has a particularly firm consistence, constituting a peculiar tallow-like mass, with a melting point of 45° C. The fat of adults, however, separates, at the ordinary temperature of a room, into two layers. The upper layer is completely fluid, translucent and of a yellowish color, and only solidifies at temperatures under zero Centigrade. The lower layer is a crystalline mass, which has its melting point at 36° C. Further investigations were made on about a kilogramme of each kind of fat. The fatty acids obtained from the fat of newly-born children (after precipitation with hydrochloric acid) were found to melt at 51° C., and those obtained from the fat of adults had a melting point of 38° C. The former was found to contain three times as much palmitic and stearic acid as the latter. The palmitic acid preponderated over the stearic in each kind of fat, but much more in that of children than of adults, the proportion being in the former four to one, but in the latter nine to one. There are 86 per cent. of oleic acid, 8 per cent. of palmitic acid, and 2 per cent. of stearic acid in the fat of an adult; whereas in the child the proportion of oleic acid is only 65 per cent., the palmitic acid 28 per cent., and the stearic acid 3 per cent.

How Much Milk Does an Infant at the Breast take Daily?—Dr. J. Lewis

Smith says (*Archives of Pediatrics*) that he and Dr. Chadbourne determined the amount of milk taken by several infants by actual weight. Taking 451.9 grains as the weight of an ounce of milk of s. g. 1.031. He concludes that a baby the first five weeks who takes the breast every two hours receives only a little more than a fluid ounce at each nursing. Of fifteen nurslings between six and ten months the average received by each twenty-four and six-tenths fluid ounces. Hence, if the nursings were eight in twenty-four hours, three ounces were taken at each nursing; if the nursings were twelve, the quantity each time was two ounces. Under two months of age the stomach cannot receive much more than one and a half fluid ounces. At six months the infant can probably take and digest three ounces, and in the last half of the first year four ounces.

WHEN TO ASPIRATE.—Prof. Da Costa says (*College and Clinical Record*): Do not aspirate pleuritic effusions as long as urgent symptoms, such as failure of the heart and symptoms of blood-poisoning, do not demand it, for the liquid will generally reaccumulate, and the second time it will be purulent. Give iodide of potash and other remedies, to promote absorption and to make the kidneys act. For the latter the infusion of juniper and jaborandi internally, and dry cupping over the region of the kidneys will often be of benefit.

WOMAN'S MILK.—The following is the formula suggested by Prof. Leeds, of Stephens' Institute, as the best substitute for woman's milk: 1 gill of cow's milk, fresh and unskimmed; 1 gill of water; 2 tablespoonfuls of rich cream; 200 grains of milk sugar; 1¼ grains of extractum pancreatis; 4 grains of sodium bicarbonate. "Put this in a nursing bottle, place the bottle in water made so warm that the whole hand cannot be held in it without pain longer than one minute. Keep the milk at this temperature for twenty minutes. The milk should be prepared just before using."—*Archives of Ped.*

BILATERAL RUPTURE OF THE QUADRICEPS EXTENSOR TENDON.—Dr. V. P. Gibney records (*New York Medical Journal*) the case of a man who, ten years previously to his seeing him, fell and ruptured the right quadriceps extensor tendon at its attachment to the patella. Four years later he met with the same accident on the opposite side. When seen, the muscle seemed to have entirely wasted on each side, and the finger could be passed behind the upper border of the patella on to the intercondyloid notch of the femur. He had completely lost all power of extending the knee-joint. He is reported as able to walk well on a level surface and to meet with very few falls. The case is of great interest from the accident being bilateral, and in this respect corresponding to what is not rarely seen in fracture of the patella.

WHITE OF EGG IN OBSTINATE DIARRHŒA.—Celli has recently called attention to the curative properties of the albumen of hen's eggs in severe diarrhœal affections. In a discussion before a medical society in Rome, he advocated its use, and related two cases of chronic enteritis and diarrhœa which, having resisted all therapy, speedily made complete recoveries under the use of albumen. The same diet is strongly recommended in the diarrhœa accompanying febrile cachexia, and in that of phthisis. In two cases of diarrhœa dependent upon tertiary syphilis, it was found of no avail. On post-mortem examination diffuse amyloid degeneration of the arterioles of the villi was found in these cases. The mode of administration is as follows: The whites of eight or ten eggs are beaten up and made into an emulsion with a pint of water. This is to be taken in divided quantities during the day. More may be given if desired. The insipid taste can be improved with lemon, anise or sugar. In case of colic a few drops of tincture of opium may be added.—*Allgemeine Medicinische Central Zeitung.*

TREATMENT OF NASAL POLYPI.—As a valuable contribution to the therapeutics of this unpleasant condition, we are glad to note that Dr. Richardson (*Asclepiad*) recommends the use of sodium ethylate in the treatment of nasal polypus. The caustic agent is appled by means of a probe made of soft cotton-wool twisted into shape on the points of a pair of forceps. This cotton probe is saturated with the ethylate and then plunged into the substance of the polypus. On removing the cotton it commonly happens that the patient can expel the whole mass of destroyed polypus, in a semi-fluid form, by blowing the nose sharply. A second application ought to be made with a view of destroying the base of the polypus. The mode of action is said to be sufficiently clear. The ethylate is decomposed by contact with the water of the polypus into caustic soda and alcohol; the latter coaglates the albuminoids and the former acts as a powerful caustic. With the exception of some burning pain, no unpleasant effects seem to follow the use of this method.

SHORTSIGHTEDNESS.—A writer in the London *Times* claims the cause of myopia to be the application of the eyes to near objects; in other words, the poring over books and handicrafts. When the eyes are directed to a near object, they are turned in or rendered convergent, so that the axes of vision meet upon it, and this position is maintained by a muscular effort which, if continued, alters the shape of the eye in the direction of elongation. Manifestly, the alteration will be most easily effected during youth, when the tissues of the body, including those of the eye, are comparatively lax and distensible, and it will also be most easily effected among those young people whose tissues are exceptionally weak, by reason of inadequate food or of unhealthy descent or surroundings. Badly-lighted schools are the great manufactories of myopia, the bad light compelling approximation of the books or other materials of study.

TREATMENT OF CORNEAL OPACITIES.—Dr. Michel recommends sulphate of cadmium, of the strength of two and a half grains to the ounce of mucilage, as an application to opacities of the cornea. A camel's-hair brush, dipped in this wash, is applied to the centre of the spot and retained in contact with it for a few seconds. At first the application is made once a day, but after a while is repeated two or three times in the twenty-four hours. When the pain grows less, the strength of the solution may be increased to five grains, or even seven grains to the ounce. When the opacity is of recent formation it rapidly disappears under this treatment, but when it is of old date the applications must be long continued.—*Practitioner.*

A CASE OF TRANSFORMATION OF SCIRRHUS INTO ENCEPHALOID CANCER.—Dr Guermonprez, of Lille, has published in the *Gazette des Hopitaux* some observations which confirm the view that characteristic scirrhus may be at times transformed into true encephaloid. Velpeau pointed out the fact that all scirrhous cancers were not identical, and described an atrophic and a lardaceous form, the latter having a more rapid evolution. In the case cited, a traumatism, received two years before death, is supposed to have determined the metamorphosis of the growth. The scirrhus which began in the mammary gland invaded the bony and cartilaginous structure of the fourth rib, and from this point to the tracheobronchial ganglionic mass there was a bridge of new growth following the lymphatic vessels and resembling Gruyère cheese, both in consistence and color. The encephaloid character was marked in the principal glands of the tracheobronchial group; also in the lower part of the sterno-mastoid, in the axillary and supra-clavicular glands of the same side. A group of the bronchial glands pressing upon the pneumograstric, where it crosses the bronchus, resulted in dyspnœa, cyanosis, and finally death, before the disease had produced a marked degree of cachexia.

Hysterectomy for Uterine Cancer.—In a recent discussion of the treatment of carcinoma uteri by extirpation of the uterus, before the Paris Academy of Surgery (*Bull. Gén. de Thérapeutique*), most of the surgeons agreed with the opinion expressed by Verneuil and Polaillon that hysterectomy would be a very good operation at the beginning of cancer, if it were less dangerous; but, with the progress of surgery, its dangers may be lessened. It is, therefore, an operation for the future. But under the present conditions, the mortality being one in three, the surgeon has not the right to resort to it, because fortunate results from it are far from being frequent.

Nephrectomy for Calculous Pyelitis.—The dependence of the issue of nephrectomy upon the healthy state of functional activity of the remaining organ is again shown by Dr. E. Sonnenburg, who details a fatal case in which the non-extirpated kidney exhibited no definite structural change. The case was that of a woman, fifty-two years of age, who had suffered for months from pain in the right loin, accompanied by fever, wasting and polyuria. She came under Dr. Sonnenburg's care in August, 1884, when the presence of a large fluctuating tumor in the right half of the abdomen was ascertained, and on aspiration pus was drawn off from it. Nephrectomy by the abdominal incision was performed on August 25. The operation was difficult and tedious, the thin wall of the cyst rupturing in the removal. The whole pedicle was secured to the wound, but it was found impossible to suture the peritoneum. The organ was converted into a chambered, pus-containing sac, with numerous thin-walled, outlying cysts, and a large, branching calculus was lodged in the dilated pelvis. Hardly any real tissue remained. Collapse followed, terminating in death on the second day, and during the whole interval no urine was secreted. There was no peritonitis; the left kidney weighed a little over six ounces, and was anæmic, but, histologically, almost normal, except for some localized fatty degeneration of the renal cells and slight increase in places of the interstitial tissue. The fatal issue of the case could not, the author thinks, be attributed to the shock of the operation and the collapse alone. But the condition of anuria, the cause of which remains unexplained, was in the main answerable for this result.—*Berliner Klinische Wochenschrift.*

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## MEDICAL NEWS.

Medical Society of the State of New York.—At the annual meeting of the N. Y. State Medical Society, held in Albany during the first week in February, Dr. A. Vanderveer, of Albany, was elected president, and Dr. Alfred C. Post, of New York, vice-president for the ensuing year. The following honorary members were elected: Dr. J. L. Cabell, of Virginia; Dr. J. F. Whittaker, of Ohio; Dr. T. G. Wormly, of Pennsylvania, and Dr. T. S. Clouston, of Edinburg, Scotland. The society voted to recommend the passage by the Legislature of a bill providing for the organization of a State Board of Medical Examiners, to consist of six regular physicians (three of whom must be members of the faculties of incorporated medical colleges, and three unconnected with such institutions), two homœopaths and one eclectic.

FROSTBITTEN ON THE BROOKLYN BRIDGE.—About forty persons were frostbitten while crossing the Brooklyn Bridge on the 11th of February, which was one of the most blustering and intensely cold days of the season.

NEW YORK COUNTY MEDICAL ASSOCIATION.—At the annual meeting, held January 19, this active organization entered upon its second year. The following officers were elected: President, Dr. Charles A. Leale; vice-president, Dr. E. G. Janeway; secretary, Dr. P. Brynberg Porter; treasurer, Dr. Whitman V. White. In the course of his valedictory address the retiring president, the venerable Dr. Wm. Detmold, remarked that in a professional career extending now over more than half a century there was nothing that he looked back upon with so much pride as the fact that he had been selected as the first president of the County Association.

BILL FOR THE PROMOTION OF ANATOMICAL SCIENCE, ETC., IN THE DISTRICT OF COLUMBIA.—On January 12th the House of Representatives passed a bill to the effect that any public officer or officers having lawful charge of, or control over, any hospital, prison, almshouse, jail, morgue, or asylum, within the District of Columbia, may deliver to the duly authorized agent of any medical college or colleges in the said District of Columbia the bodies of such deceased persons as are required to be buried at the public expense, said bodies to be distributed among the several colleges equitably, the number assigned to each being proportioned to that of its students; provided, however, that if the deceased person, during his last illness, of his own accord, requested to be buried, or if, within twenty-four hours after his death, any person claiming to be, and satisfying the authorities that he is, of kindred to the deceased, asks to have the body buried, or if such deceased person was a stranger or traveler who suddenly died, the body shall not be so delivered, but shall be buried. In the second section of the bill it is provided that every physician and surgeon, before receiving such dead body, shall give to the officers surrendering the same to him a sufficient bond that each body shall be used only for the promotion of anatomical and surgical knowledge within the District of Columbia, and that after having being so used the remains thereof shall be decently buried; and whosoever shall use such body or bodies for any purpose other than that aforesaid, or shall remove the same beyond the limits of the said District of Columbia, and whosoever shall sell or buy such body or bodies, or in anyway traffic in the same, or who shall disturb or remove bodies from graves in which they have been buried, shall be deemed guilty of a misdemeanor, and shall on conviction be imprisoned for a term not exceeding three years, at hard labor, in the District (or city) jail. The intention of the bill is said to do away with the necessity or temptation for violating the laws, and at the same time in an open and legal way to provide the requisite dissecting material for the study and advancement of anatomical science in the District.

A VENERABLE AGE.—WILMINGTON, Ill., Feb. 15—"Auntie Wilmore," as she was familiarly called, or Nancy Cass Wilmore, as her real name is said to have been, died in this city, Wednesday, at the age of 116 years. She was undoubtedly the oldest person in this State, if not in the United States. Her early history was not clear to her until on her deathbed, when her whole life seemed to pass in review before her, and a person who was present wrote down her history as she related it. She was born about the year 1769 in North Carolina. Her father, Samuel Cass, then removed to Shakertown, Ky. Her mother died at the age of 30, leaving nine children, and her father soon married another wife, by whom he had seven children. Of the sixteen children, all were boys, except Nancy. Her father lived in Kentucky for eight or nine years, and then removed to Alabama, though she remained in Kentucky, and married as her first husband a man named Keeney. When first known in Wilmington she was a widow. Here she married John Wilmore, who was a miller. His death, forty-five years ago, is recollected by many residents of this city, and both she and her husband were considered quite old at that time.

GUARDING AGAINST CHOLERA.—The *Boston Medical and Surgical Journal* announces that Mayor O'Brien, of that city, has appointed Drs. H. J. Bowditch, H. J. Bigelow, George B. Shattuck, C. F. Folsom and others an advisory committee in regard to the question of a possible epidemic of cholera next summer.

BURNING OF AN INSANE ASYLUM.—Nearly thirty lives were lost during the burning of a portion of the insane department of the Philadelphia Almshouse, on the night of February 12th.

THE NEW YORK ORTHOPÆDIC SOCIETY.—Of the multiplication of medical societies there is no end. This new one in New York held its first meeting on January 29th, when Dr. A. B. Judson read a paper on "The Management of the Abscesses of Hip Disease."

DEATH OF DR. M. WHITEHEAD.—Dr. M. Whitehead, ex-President of the State Medical Society of North Carolina, died at his home at Salisbury, in that State, on the 2d of January, 1885. He was born in Nelson County, Va., in January, 1821, received the degree of M.D. from the College in Richmond in 1844, and commenced the practice of medicine in Salisbury in 1845. He was one of the commissioners appointed to locate and build the magnificent Western North Carolina Insane Asylum, erected at Morganton, and for a number of years he was one of the directors of that institution, being the President of the Board at the time of his resignation. His son, Dr. John Whitehead, succeeds to his practice.

New York Polyclinic.—The Board of Directors and Faculty of the New York Polyclinic held their annual meeting on January 20th. The secretary submitted to the Board a report of the work done by the Polyclinic from the opening, November 7th, 1882, to January 20th, 1885, giving in detail the history of the organization of the school, its plan of work, and the results achieved. The number of practitioners who had studied in the Polyclinic as members of the class was 463. The attendance for the present session was 25 per cent. in excess of any former year. The following directors were elected for 1885: Prof. Fordyce Barker, M.D. LL.D.; Prof. Frank H. Hamilton, M.D., LL.D.; Thomas Addis Emmet, M.D., LL.D.; Prof. T. Gaillard Thomas, M.D.; Prof. Alfred L. Loomis, M.D.; Hon. Benjamin F. Tracy; Hon. Everett P. Wheeler; H. Dormitzer, Esq.; Julius Hammerslaugh, Esq.; H. H. Rogers, Esq.; Charles Coudert, Esq.; Rev. Thomas Armitage, D.D.; A. F. Willmarth, Esq.; Wm. Allen Butler, Esq.; George B. Gunnell, Esq.; Wm. S. Wardwell, Esq.

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## EDITORIALS.

### THE FUTURE OF THE JOURNAL.

The gifted editor of this journal having been stricken down by the hand of death in the midst of his usefulness and active labors, it has been thought by his friends that the work which he had personally founded, upon which he had for many years expended his best energies, with an increasing appreciation on the part of the profession, and which had already completed its thirty-ninth volume, should not be allowed to pass out of existence, but ought to be continued as a memorial of his life and services, a living and permanent monument to his zeal, his industry and his attainments. With this laudable end in view, and with the feeling that they were justified in entertaining the brightest hopes of its accomplishment, they have, therefore, prevailed upon his family to go on with the publication of the Journal, and have secured for its editorial management the services of Dr. P. Brynberg Porter, who was formerly the regular New York correspondent of both the *American Medical Weekly* and the Journal when they were published at Louisville, who enjoyed the entire confidence of the late editor, and who, from his abilities and experience in medical journalism, it is confidently believed, is well qualified to perform in a satisfactory manner the duties of the important charge now entrusted to him. To aid him in his difficult task, he will be fortunate in having for his asssociates the following distinguished gentlemen, whose names certainly need no introduction to the American profession: T. Gaillard Thomas and George T. Harrison, of New York; Hunter McGuire, of Richmond, Va., and Claudius H. Mastin, of Mobile, Ala. In addition, he has been promised the assistance of a large number of the ablest medical writers in the country, both North and South, who will enrich the pages of the JOURNAL with original contributions. Under such circumstances its future usefulness seems to be sufficiently assured, and it is believed that if its old friends will continue to lend it their cordial support, many new ones will be influenced to rally to its standard, and that it will henceforth steadily progress upon a career of constantly-increasing prosperity.

All the features which have made the JOURNAL so attractive in the past will be retained, and such new ones will be added, from time to time, as its best interests may seem to demand.

It will be the aim of its managers to render it of the greatest practical utility possible to the practitioner engaged in active professional work; and while its readers will be kept well posted on the leading topics of the scientific medical thought of the day, more attention will be paid to matters which will be of real service to them at the bedsides of their patients and in their office practice than to abstruse points of only theoretical interest. After all, the one great end of all medical science is the successful treatment of disease, which includes, of course, its prophylaxis and the alleviation of suffering where a cure is impossible.

In conclusion, it may be of interest to announce that in the March number of the JOURNAL there will appear original contributions from one of the collaborators, Dr. Thomas, and from the well known dermatologist, Dr. L. Duncan Bulkley, as well as a review of recent works on diseases of the nose and throat, by Mackenzie, Wagner, Lefferts and Noakes, from the pen of Dr. D. Bryson Delavan, the accomplished Secretary of the American Laryngological Association.

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ENVELOPES INSTEAD OF WRAPPERS will be used hereafter in mailing this JOURNAL; it will thus reach the subscribers without injury in the mail, and will, it is hoped, be far more welcomed. In accordance with the custom of almost all of the better periodicals, there will be stated on every envelope or wrapper the date to which the subscriber has paid. This will be done in lieu of sending receipts, and all who are deterred from sending on their subscription dues because of ignorance as to the condition of their accounts will thus be relieved of a very disagreeable suspense. Any such wrapper or envelope is a legal receipt, and subscribers will thus be saved the annoyance of keeping their receipts and of referring to them for guidance.

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GAILLARD'S MEDICAL JOURNAL

Scientia et Veritas Sine Timore.

VOL. XL. NEW YORK, MARCH, 1885. No. 3.

# ORIGINAL ARTICLES.

## ARTICLE I.—PELVIC SPINA-BIFIDA. By T. GAILLARD THOMAS, M.D., Surgeon to the Woman's Hospital, New York.

The paper which I am about to write will be an incomplete one, for the reason that the two cases which are offered as evidence sustaining it are unsupported by pathological proof. Nevertheless, I feel sure that good will come of it by pointing out to others the dangers which attend upon surgical interference with a rare form of pelvic tumor, which will be described, and by directing attention to a pathological condition concerning which others may be able to furnish information for which I have looked in the literature at my disposal almost in vain.

In 1875 a patient from one of the towns of New Jersey called upon me on account of a peculiar weight and discomfort about the pelvis, which, at menstrual periods, increased to an absolute pain in the sacrum and loins. She was twenty-eight years of age, had been married for two years, and had never been pregnant. Absolutely no other symptoms than those mentioned were complained of, and she desired that an examination should be made to account for them, and for the additional fact that after two years of married life she still failed to conceive.

Upon examination, I found the cavity of the sacrum filled by a long, narrow cyst, which seemed to adhere to it. This cyst was evidently posterior to the rectum, which was found lying somewhat over it and obliquely to one side, but it did not in any way interfere with the function of the intestine. Nor did it appear to produce any difficulty in the escape of menstrual blood, and I could not attribute to it the existing sterility, since a sharp, congenital anteflexion of the uterus presented itself as a much more probable cause of this condition.

Explaining fully the condition of affairs to the patient and her husband, I advised non-interference with this curiously located cyst, basing my advice upon the facts that it was producing few and unimportant symptoms, and that its obscurity puzzled me to such an extent that I felt averse to meddling with it.

After this, at intervals of five or six months, I saw and examined this patient for a period extending over two years, and, although both she and her husband urged me to tap the cyst, I refused to do so, and at the end of that time they removed to Florida, and I lost sight of them. What the issue of the case was I am unable to say, although I have made every effort to learn, and I simply stored it away in my memory as one of those unclassified cases with which we so often meet, and which are rendered by this fact useless as material from which to draw reliable deductions.

I met with no other case at all resembling this until May, 1882, when Miss A., a handsome and healthy looking girl, nineteen years of age, residing in New York, was brought to me by her mother, on account of sacral pain, fullness about the pelvis, backache after locomotion, and severe dysmenorrhœa. I made a careful examination of the case, and found a cyst apparently attached to the hollow of the sacrum, pushing the uterus upward and the rectum forward, and to a very great extent occluding the vaginal canal. So marked was this occlusion that I attributed the dysmenorrhœa to its obstructing influence.

I at once classed the case with that just related, but was entirely puzzled by it, and could arrive at no diagnosis. All this I fully explained to the patient's mother, and advised non-interference. Subsequently, I saw and examined the case about once every month, but did nothing for it. As the young lady was engaged to be married, and as I thought that the existence of the cyst rendered marriage unadvisable, she and her mother steadily urged that it should be tapped, and this in face of my reiterated opinion that it was not wise to adopt this measure.

In six months from this time I consented to try aspiration, and, introducing the smallest of Dieulafoy's needles with all antiseptic precautions, I drew off about ℥ viii. of a clear, limpid, non-albuminous fluid, which was carefully examined by Dr. Garrigues. He, however, declined to express any opinion as to its nature or origin, and merely described it as I have done above, saying in addition, that it contained chlorides in small amount.

The emptying of the sac was followed by grave and unexpected symptoms; the temperature rose to 104°, the pulse to 120, while the patient complained of very severe headache. These symptoms lasted for three or four days, and then very slowly subsided. At a loss for a diagnosis, we attributed these symptoms to malarial poisoning, and treated the case with quinine, and morphia hypodermically.

After her recovery the patient called to see me again, and in two months the sac had entirely refilled. Again came the repeated and urgent requests for more radical measures, and again did I refuse to adopt them. Finally I gave way so far as to offer this compromise: that the patient should wait for six months, and that if at the end of that time she and her mother, in spite of the trouble which had followed aspiration, were still determined to accept the arbitrament of operation of still more radical character, I would adopt drainage.

In six months they returned; I examined and found no change whatever in the size and relations of the cyst; and as both the patient and her mother urged radical operation, I decided to risk it, although an undefined fear possessed me as to the result.

The patient having been anæsthetized by Dr. Du Bois, with the assistance of Dr. S. B. Jones, I placed her upon the back in the lithotomy position, and, separating the labia majora by retractors, I opened the sac, gave vent to about a half pint of fluid resembling distilled water, stitched the walls of the sac to the vaginal opening and put the patient to bed. The fluid dripped away steadily, and I hoped by the drainage to cure the disease.

Dr. Du Bois saw her at 8 P.M. (the operation occurred about 3 P.M.), and found her suffering from a very severe headache, and a marked tendency to hysteria. He gave her an anodyne and left her. In the morning he saw her again, found the headache more severe, the pulse ranging at 110 to the minute, and the temperature at 102°. In the evening I saw her, and felt exceedingly anxious, not only from these symptoms, but from the peculiarly wild and maniacal facies which she exhibited. Still, no special anxiety possessed me at this time, nor did I suspect the real nature of the case.

On the next morning the symptoms were all more favorable, but at four in the afternoon I was called in haste to see her; found her almost in a condition of hysterical mania, with a pulse of 120, a temperature of 104°, and exhibiting an unmistakeable tendency to opisthotonos. Her general appearance and symptoms resembled very closely those which mark the initiatory stage of tetanus. Especially marked were the muscular pains which occur at this time about the nucha and the masseter region. Now, there suddenly flashed across my mind the full recognition of the case; an exactly similar one, which had occurred to Dr. Emmet in the Woman's Hospital, in 1870, came back to my memory, from which, until now, it had been entirely effaced; and, as if a curtain had been lifted, I saw clearly what had, until this moment, been so obscure. I had opened a sac formed by the meninges of the cord, which had projected through an imperfection in the sacrum into the pelvic cavity. The membranes of brain and cord were deprived of the rachidian fluid, and the consequences were before me!

I at once collected my assistants, anæsthetized the patient with chloroform, and sewed up the opening in the sac. I fully discussed with my associates the propriety of filling the sac with warm distilled water, but this step was not thought to be warrantable, and was not adopted.

Whether from the chloroform narcosis or not I cannot say, but for some hours after this the patient markedly improved, and I had great hope that I had retraced my unfortunate steps in time; but about twelve hours after the closure of the sac the heart suddenly failed, opisthotonos occurred, the patient shrieked from the severity of her cephalalgia and died.

No post-mortem examination was obtained, and this most striking and interesting case must remain incomplete and uncertain. Nevertheless, from my observations throughout its progress, before and after the two operations which were performed, aspiration and drainage, I feel confident that it belongs to the same class as that of Dr. Emmet, which I shall now relate. And I feel very sure that the first case which I have mentioned in this paper was of the same character.

The case which I have mentioned as suddenly coming to my mind, and clearing up all my doubts, is thus related by Dr. T. A. Emmet, in his work on the "Principles and Practice of Gynæcology," page 675:

"*Case LXXVI.*—Nov. 17, 1870, an unmarried woman, a native of the United States, aged 36, was admitted to the Woman's Hospital with a supposed ovarian tumor. She related that ten years previous to admittance she detected a swelling as large as a goose egg in the right iliac region, her attention having been drawn to it by shooting pains through the abdomen, and starting from this point. She began to suffer from obstinate constipation, from which she could never obtain entire relief. Otherwise, she had experienced little inconvenience, except from a feeling of distention and occasional pain, while the size of the tumor increased very slowly. Once, when the abdomen was greatly distended, retention of urine took place for some hours, and the catheter had to be used; but this did not occur again. She had been suffering for some time with pain in the back and over the sacrum, which was increased by walking, and would extend to the thigh after any exercise. The right leg, and sometimes both feet, were œdematous. The patient on admission presented a very cachectic appearance, and was very much emaciated.

"The abdomen was found uniformly enlarged and tympanitic over its whole surface. No solid mass could be detected by palpation, except a slight prominence in the right iliac region, which was thought to be the fundus of the uterus. On making a vaginal examination, the cervix uteri could be scarcely reached, situated as it was about the pubes, while a mass was felt behind, in the cul-de-sac, extending to the right; apparently an ovarian cyst. But from a digital examination by the rectum it was made evident that the rectum was pushed forward by a large, soft, fluctuating tumor behind it, which filled up the bottom of the sacrum to within a short distance of the anus. It was firmly adherent to the sacral prominence. . . . .

"December 2.—The patient was placed under ether, and a fine trocar was introduced into the sac about three inches beyond the anus, by which an ounce or more of its contents was aspirated by Dieulafoy's pump. This fluid was serous in character, perfectly clear and limpid, resembling hysterical urine. It contained no albumen, and the microscope revealed nothing more than a few oil globules, which had beyond question been attached to the instrument before its introduction. She never recovered from the effects of the ether, and had a chill twenty-three hours after the cyst was punctured; the action of the kidneys was at one time nearly suspended; she lingered for several days in a partial stupor, and ultimately died from uræmic poisoning.

"Autopsy nine hours and a half after death. On opening the abdomen the colon was so much distended as to fill the whole cavity, and reached to a level with the fourth rib, being filled with flatus and feces. The upper border of the uterus was two inches below the umbilicus, and to the right side. The bladder, in its position in front of the uterus, covered it, except a small portion of the fundus. A cyst, which contained some three quarts of fluid, was found behind and to the right of the rectum, filling the cavity of the pelvis completely, and extending up to a line with the second lumbar vertebra. The left ovary and broad ligament were spread out over the surface of the rectum; both ureters were in front of the tumor, the left being much dilated. The rectum was greatly constricted in its upper portion. The liver was covered by the colon. There was chronic cystitis. The kidneys were found diseased, but unfortunately my notes of the case do not state the extent. In attempting to discover the attachments of the cyst in the hollow of the sacrum, it was ruptured. The sacrum was removed, and a spina-bifida found, the three lower bones of the sacrum being deficient on the right side. A funnel-shaped opening, communicated directly with the spinal canal, from which projected portions of the cauda equina an inch or more in length. After carefully examining this opening, I was satisfied that the cyst had been cut away from its margin. Although the posterior portions of the bones were wanting, no external bulging of the sac could take place positively, in consequence of the dense ligamentous structure bridging it over the posterior surface of the sac, and to the right side a network of nerves from the spinal canal extended some distance, and gradually became lost.

"The sacrum was dried and prepared by removing the ligamentous tissue which stretched across the posterior wall, where the bony structure was wanting, but the anterior surface was left entire. On examining the preparation by transmitted light, a network of large nerve filaments, similar to those on the sac, could be seen passing down directly from the canal and spread out over the entire surface. These were under a thin membrane, which was doubtless a continuation of that framing the posterior wall of the spinal canal. Where the sac had been removed, these nerves could be seen but little diminished in size, and were included in the division on the right side throughout the whole extent. The boundary of the canal at the point where the sac had been removed, as indicated by the rough edge, was oval in shape. It extended from the upper margin of the second sacral foramen on the right to the position of the coccyx, and from the edges of the foramina of the third and fourth bones on the left side to what would have been the width of the sacrum had the bone been fully developed. The edges of the sacral bone above and of those on the left side were gradually rounded off, so as to form the funnel-shaped passage, already described as leading into the spinal canal. There was a deficiency of the lower spinal process, and there was no trace of the coccyx. . The case can be scarcely called one of true spina-bifida. It is probable that the bone between the second and third sacral foramina was not developed, and an opening was left large enough for a sac to protrude, and the deficiency afterward found may have resulted from absorption as the sac gradually increased in size.

"I have been unable to find any case on record where a deficiency existed in the anterior part of the spinal column. This case presented a feature of tolerance to pressure of the cord which does not exist in other cases of spina-bifida, except in rare instances, and then only to a limited extent. Its origin being, of course, congenital, the duration of life in this case has also a remarkable feature, and, while the age was given as but thirty-five, the patient presented the appearance of being fully ten years older."

Some who read these pages may doubt whether the first of my cases belonged to this class of pelvic tumor, but no one will entertain any doubt as to the second. If there be any such, let me ask of them what other cyst could by its evacuation produce such striking, such peculiar and such fatal results?

Although our knowledge concerning this form of pelvic tumor is at present so meagre, we may, I think, even now deduce the following lessons from the two fatal cases recorded in this essay which will prove useful for the prevention of a very possible increase in the number of similar unfortunate ones :

1. Where a cyst is found in the pelvis, behind the rectum, filling the hollow of the sacrum, apparently attached to that bone, let the diagnostician carefully exclude the possibility of its being spina-bifida before interfering with it.

2. If it be decided to interfere with such a tumor, let a small portion of fluid be first drawn by a hypodermic needle, and if this be found to be a limpid, non-albuminous fluid, let the probabilities of the sac being connected with the meninges of the cord receive due consideration, and guard against further interference.

## ARTICLE II.—ON THE ETIOLOGY OF ACNE; A CLINICAL STUDY.* By L. DUNCAN BULKLEY, A.M., M.D., New York.

The etiological factors which have to do with affections of the sebaceous glands are so varied, and the causes of the eruption in individual cases differ so greatly, that it is very difficult to determine with any positiveness the real bearing of any one of the influences which have been asserted to be productive of acne, or of the clinical conditions which may be observed in persons with this eruption. In regard to each feature developed it may be claimed that multitudes are similarly affected without the concurrence of acne, and that there are, again, many cases of sebaceous disease where these etiological factors cannot be recognized.

But, on the other hand, the same is true in regard to many other diseases, and at the best the study of etiology is yet in its infancy, and of but few maladies can it be asserted absolutely that they are always caused by a definite, fixed and determined agent or factor. This, certainly, is not the case in regard to acne, for there is no one single cause or condition which will invariably produce it; unless it be such articles as iodine and bromine, and practically such agencies have no bearing upon the real question at hand.

But, as medical science is based largely upon observation and experience, clinical facts closely studied and recorded do furnish data from which may be drawn, with tolerable certainty, conclusions which will at least aid in understanding a disease as it is presented for treatment. It is in this light that we shall study the causes of acne, not asserting that the clinical features developed are certainly and invariably those which produce the eruption, but, while presenting the opinions of others, the aim will be to illustrate the subject and confirm or oppose previous views by matter drawn from personally-observed cases.

The causes of acne may be considered under three heads:

1. General causes, pertaining to classes of cases.
2. Special constitutional or systemic causes, relating to individual cases.
3. Local causes.

Under general or predisposing causes we have to consider sex, age, heredity, constitution, general dyscrasic conditions, etc.

First, as to sex.

From the tables herewith given it is seen that acne is presented for treatment much more frequently in females than in males; in private practice males formed but 29 per cent., and in public practice but 37.6 per cent., and in the total but 32.6 per cent., or less than one-third of the entire number. It is therefore probable that the eruption is much more common in the former than in the latter, for reasons which it is not difficult to discover. The sedentary habits of females predispose largely to the sluggish circulation, and the consequent dyspepsia and constipation, which, with imperfect tissue interchange, are at the bottom of many cases. The greater disturbances of the system which occur at puberty and at the menopause, as well as at the monthly perturbation of the system, contribute also greatly to the production of acne in females, while the special diseases to which they are subject likewise play an important part. As a local element of causation may be mentioned the greater tendency in females to make applications to the skin in the way of perfumes, powders and cosmetics, which may act injuriously.

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* From a forthcoming work on Acne by the author.

In regard to age affecting the development of sebaceous diseases, the following table (I.) shows that these affections occur comparatively seldom very early or very late in life, two-thirds of all the cases being between 15 and 30 years of age when presenting for treatment. Only 9 patients out of the 1,500 exhibited sebaceous disorder before 10 years of age; these, as we shall see later, were mainly of the functional varieties of acne.

TABLE I.

AGES OF 1,500 PATIENTS WITH DISEASES OF THE SEBACEOUS GLANDS.

| AGE. | PRIVATE PRACTICE. | | | PUBLIC PRACTICE. | | | GRAND TOTALS. |
|---|---|---|---|---|---|---|---|
| | Males. | Females. | Total. | Males. | Females. | Total. | |
| Under 10 years of age. | 1 | 1 | 2 | 2 | 5. | 7 | 9 |
| 10 years to 15 years.... | 2 | 20 | 22 | 5 | 34 | 39 | 61 |
| 15 " " 20 " .... | 49 | 134 | 183 | 81 | 126 | 207 | 390 |
| 20 " " 25 " .... | 54 | 168 | 222 | 68 | 90 | 158 | 380 |
| 25 " " 30 " .... | 42 | 113 | 155 | 30 | 38 | 68 | 223 |
| 30 " " 35 " .... | 22 | 74 | 96 | 13 | 29 | 42 | 138 |
| 35 " " 40 " .... | 24 | 52 | 76 | 11 | 27 | 38 | 114 |
| 40 " " 45 " .... | 23 | 32 | 55 | 14 | 16 | 30 | 85 |
| 45 " " 50 " .... | 12 | 17 | 29 | 6 | 7 | 13 | 42 |
| 50 " " 55 " .... | 13 | 11 | 24 | 1 | 5 | 6 | 30 |
| 55 " " 60 " .... | 5 | 0 | 5 | 1 | 3 | 4 | 9 |
| Over 60 years ........ | 8 | 2 | 10 | 2 | 7 | 9 | 19 |
| | 255 | 624 | 879 | 234 | 387 | 621 | 1,500 |

Turning now to Table II., exhibiting the ages of patients with acne simplex, we find that almost 72 per cent. of the cases were presented for treatment between the ages of 15 and 25, and on further analyses of these cases it is found that in 74 per cent. of the cases the eruption appeared at or before twenty years of age.

In regard to the early appearance of acne in females, it is noted that in 24 cases the eruption of acne simplex began with the establishment of the catamenia, and in 8 cases it began from one to three years before their appearance.

Puberty, therefore, has been justly charged as the most frequent predisposing cause of acne simplex, and the name *acne juvenilis,* which has been applied to the eruption, expresses this element very properly. The reason for the greater tendency of the sebaceous glands to take on morbid action during this early, developmental period of life is undoubtedly their increased physiological activity at this time, in connection with the growth of hair. With this development of the hair and sebaceous glands there is increased nerve activity and augmented blood-supply, and with these comes the liability to congestion and inflammation, as is the case in other organs and portions of the body.

TABLE II.

AGES OF 726 PATIENTS WITH ACNE SIMPLEX.

| AGE. | PRIVATE PRACTICE. | | | PUBLIC PRACTICE. | | | GRAND TOTALS. |
|---|---|---|---|---|---|---|---|
| | Males. | Females. | Total. | Males. | Females. | Total. | |
| Under 10 years of age.. | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 10 years to 15 years.... | 1 | 8 | 9 | 2 | 23 | 25 | 34 |
| 15 “ “ 20 “ .... | 37 | 110 | 147 | 52 | 91 | 143 | 290 |
| 20 “ “ 25 “ .... | 29 | 114 | 143 | 39 | 50 | 89 | 232 |
| 25 “ “ 30 “ .... | 20 | 58 | 78 | 13 | 12 | 25 | 103 |
| 30 “ “ 35 “ .... | 2 | 22 | 24 | 1 | 8 | 9 | 33 |
| 35 “ “ 40 “ .... | 5 | 7 | 12 | 2 | 6 | 8 | 20 |
| 40 “ “ 45 “ .... | 2 | 4 | 6 | 2 | 2 | 4 | 10 |
| Over 45 years.......... | 1 | 0 | 1 | 0 | 2 | 2 | 3 |
| | 97 | 323 | 420 | 111 | 195 | 306 | 726 |

But puberty and the development of the hairs and sebaceous glands are natural processes or conditions, and should not be followed by untoward symptoms under circumstances of perfect health. And this, indeed, is what is observed, namely, that when the health is perfect and the functions are normally performed, puberty passes without the occurrence of acne, or, if single glands become inflamed, they rapidly subside and the disturbance is very transitory.

We cannot, therefore, in the strictest sense of the term, regard puberty as a cause of acne simplex, although the age of puberty is almost a necessary element, as senility is almost an effectual obstacle to its occurrence. But the frequency of acne at the period of puberty may be rather attributed to the derangements of health, to be noticed hereafter, which are especially liable to occur during this time of youthful carelessness and indiscretion. The bearings of sexual disturbances at this period will be considered later.

It will be seen, however, that even inflammatory sebaceous diseases are not confined to the age of puberty, but that severe and obstinate eruptions of acne indurata and rosacea occur much later, and long after full development has taken place ; and also that even acne simplex, or superficial inflammations of single glands, is occasionally met with quite late in life. Puberty is, therefore, but one of the predisposing causes of sebaceous disease.

Heredity has sometimes been claimed to be a factor in the causation of acne, but there does not seem to be much evidence that this element can be regarded as of very great importance. It was quite exceptional to have more than one member of a family under treatment for acne, and the notes of these cases do not present much proof of the heredity of the complaint. The following table (III.) may be of some interest in showing the number of patients in whom points bearing on the subject were recorded. It is to be understood, however, that this table presents the matter very incompletely, for inquiry into these particulars was necessarily made in comparatively few cases:

TABLE III.

HEREDITY, AS RECORDED, IN 879 PRIVATE PATIENTS WITH ACNE.

| DISEASE. | Parents, one or both. | Brothers and Sisters. | Uncles and Aunts. | Cousins. | Children. | Grand-parents. | "Families." | TOTAL. |
|---|---|---|---|---|---|---|---|---|
| Acne | 41 | 119 | 9 | 2 | 6 | 2 | 6 | 185 |
| Eczema | 27 | 13 | 1 | 2 | 1 | 1 | 3 | 48 |
| Psoriasis | 2 | 4 | — | 1 | 1 | — | — | 8 |
| " Eruptions " | 6 | 9 | 1 | — | 1 | — | 3 | 20 |
| | 76 | 145 | 11 | 5 | 9 | 3 | 12 | 261 |
| Rheumatism | 44 | 16 | 2 | — | 1 | 5 | 17 | 85 |
| Gout | 32 | 7 | 4 | — | — | 7 | 16 | 66 |
| Phthisis | 23 | 12 | 1 | — | — | — | 21 | 57 |
| " Scrofula " | — | 4 | — | 1 | — | 1 | 2 | 8 |
| | 99 | 39 | 7 | 1 | 1 | 13 | 56 | 216 |

In this table the figures represent separate patients who were related to the individuals affected, and in many instances there were several in a family who presented the diseases mentioned: thus, there were 119 among the cases analyzed who had one or more brothers and sisters affected with acne, and 44 whose parents, one or both, had suffered from rheumatism, etc.

Although there is little to prove that acne is hereditary to any degree, much can be found to show that certain general dyscrasic conditions, or states of constitution in families, rather tend to the eruption at one time or another. This is especially true in reference to the strumous state or inheritance, and also in reference to rheumatism and gout, and it appears that those to whom these conditions are transmitted with any force are peculiarly liable to sebaceous affections. Rheumatism, more or less severe, was noted as present in 75 patients with various forms of acne.

Certain physical characteristics and features are noted clinically to have somewhat to do with the occurence of diseases of the sebaceous glands. These affections are met with much more commonly in those of light complexion than in those possessing dark skin and hair; they are most frequently seen in subjects presenting a thick, doughy skin, and exhibiting features belonging to what is known as a lymphatic, scrofulous, or strumous state or temperament. But many cases also occur in those with thin, delicate skin and possessing a gouty diathesis; this is especially true in regard to acne rosacea, and the sebaceous diseases of middle life. Thus, with many authors, we may class scrofula and gout among the predisposing causes of sebaceous disorders.

Syphilis is sometimes spoken of as a cause of acne, but the papular and pustular eruptions of syphilis, even when occuring on the face and back, are not an affection of the sebaceous glands—an acne—but are inflammatory or neoplastic formations quite independent of this class of diseases. It has never been proved that syphilis can directly cause sebaceous disease, but the debility attending it may become an etiological factor, and thus it appears at times to produce an acne sebacea, or seborrhœa, of the scalp.

Malaria has been charged as a causative element in acne and other skin affections, but seemed to be of little influence in the cases here analyzed. In but 121 of the 879 private patients was it recorded that they had ever suffered from malarious diseases, and often this was many years previous, and in very few instances was there any evidence of such at the time of observation.

We come now to the second and most important group of causes of diseases of the sebaceous glands, namely, the special conditions which are found in individual cases, and which, from clinical observation, must be regarded as of great moment in the production of acne. These are the results produced by functional or organic disorders of the organs having to do with nutrition and reproduction.

In regard to the mode in which the glandular disorder is produced by these systemic derangements, there is need of still further study and observation. Many ascribe the eruption of acne entirely to a nervous influence, it being dependent on "reflex irritation, originating in the nervous pleuxuses of the stomach and organs of digestion, and also in the reproductive and uterine system" (Wilson, Piffard). Others claim that the nerves which supply the face, the branches of the trigeminal, are compressed in their passage through the bony canals by the repeated dilatation of the blood-vessels accompanying them. from causes which congest the face; in this way an amount of irritation is excited which is sufficient to cause increased glandular secretion and even inflammatory changes (Eulenburg, Landois, Misset). It is also very commonly supposed that the glandular disorder is caused by direct irritation from blood which is improperly elaborated, and contains elements injurious to the tissues through which it circulates and to which it supplies nourishment.

In regard to the suggestion that a local irritation of the branches of the trigeminal nerve would account for the occurrence of acne on the face, it may be stated that the theory has not been accepted, and finds little or no support in facts; moreover, it entirely fails to account for the occurrence of acne in other localities, as on the neck, back and chest. The same is more or less true of the explanation given by Simon, who considers that the distance from the centre of circulation is an element to be considered in the localization of acne on the face; in a healthy state the activity of the circulation being sufficient to preserve a normal state of the tissues, but with a weakened heart-power, or with unusual local influences, retardation of the blood-current, congestion and stasis readily occur. This theory is undoubtedly correct to a certain degree.

The real part played by the nervous system in the production of acne is difficult to determine, but for many reasons it seems very probable that it takes no unimportant share in the process. The very great influence of the nervous system over the cutaneous circulation, especially that of the face, and also over the sweat glands, is well known ; this is seen in blushing, also in the reddening of the face by excitement or exercise, and the blanching of the face in fatigue or fear, in the flushing which follows the use of liquor, and the paling of the face in nausea, in the ruddy color following the exposure to heat, and the whitening from prolonged cold. The cold sweat attending various nervous conditions is also familiar to all It seems not improbable, therefore, that secretion from the sebaceous glands is likewise largely under the influence of the nervous system, and that through the agency of the sympathetic system, possibly also through the pneumogastric, such changes may occur as will also lead to inflammation in and around them. Auspitz classes acne rosacea among angioneuroses, and Schwimmer recognizes the trophoneurotic element in all the forms of acne.

The reflex congestive element was marked in very many of the cases here analyzed ; many patients complained of flushing of the face after certain articles of food and hot drinks ; in eighteen cases it was recorded that the eruption became worse after grief, anxiety, excitement and nervousness. In multitudes of instances, as will be detailed shortly, the eruption appeared to stand in direct relation to gastro-intestinal, uterine and ovarian derangements.

Whether a reflex nervous agency, originating in alimentary, sexual and mental disturbances, is the sole method of production of sebaceous disorders, cannot now be determined, for it is quite possible that imperfect assimilation can so alter the blood state that a direct irritant effect may be produced upon the tissues to which it is supplied, and through which it circulates ; this might appear to be the case where lesions are caused by bromine and iodine taken internally. Also, in many instances, the inflammatory action appears to be set up by imprisoned sebum, and it is quite possible that the faulty secretion of sebum, which allows it to harden and distend the gland, may be due to an improper blood-supply from which the gland elaborates its secretion. Finally, in some few instances, the eruption appears to be caused by local agencies obstructing free exit of sebaceous matter or causing local irritation. But the more the subject is studied in all its bearings, the more does it seem probable that, in the majority of instances, the direct cause of faulty secretion from, and congestive and inflammatory action in and about the sebaceous glands, is found in a nerve influence, transmitted or reflected from other organs or portions of the body.

We will now study the departures from the normal state which are observed in patients with the various forms of acne, and which are recognized as having more or less to do with its production. Owing to the difficulty of obtaining reliable information and keeping full notes of cases in public institutions, the data will be given from those seen in private practice.

In not a small proportion of the cases of diseases of the sebaceous glands we find that anæmia and general debility play a very important part, and seem indeed to be the only tangible factor. In certain other cases, neurasthenia, or lowered nervous power, seems to be the only cause which can be recognized, the eruption being aggravated at each period of nervous depression, whether this be occasioned by overwork, loss of sleep, worry, or other cause. Many cases of acne in various forms are seen constantly to vary with the general condition and tone of health, and yield readily to any measures which restore vitality to the system. Thus, it not uncommonly happens that the eruption quite disappears under change of scene and relaxation from care, as during a summer vacation in the country, and returns again when the patient exhibits fatigue. This was distinctly recorded to have occurred in 48 cases, but was observed in a much larger number of times.

In quite a number of cases of acne the beginning of the eruption can be directly traced to some particular cause which has produced the debilitated condition, and not infrequently this is found in the exanthemata, or in acute disease or accident. Thus, in 7 cases the eruption dated immediately from scarlet fever or measles; in 3 from syphilis; in 23 cases the eruption followed, or was greatly increased, by attacks of malarial fever, pneumonia, bronchitis, etc., and in several cases it appeared just subsequent to a surgical operation or an accident.

The mode of operation in the production of acne in these cases is not difficult to understand. A consideration of the anatomy and physiology of the sebaceous glands recalls the fact that the process of secretion from them is one of proliferation and fatty degeneration of the lining cells; this in a normal state proceeds regularly to completion, with the result of producing an oily fluid which oozes upon the skin. In those portions of the integument which possess hairs of some size the muscles attached to the latter serve to empty the glands, if their action is sluggish. But on the face, chest and back these muscles are absent from the rudimentary hairs which are found with the sebaceous glands, and when, from an enfeebled state, the secretion of the glands proceeds sluggishly and imperfectly, the partially metamorphosed cells are retained and block the gland and its duct; the presence of this hard plug of sebaceous matter then acts as an irritant, resulting in the papules and pustules of acne. In some individuals this low tone of vital action seems to be almost their normal condition, and the sebaceous disorder recurs readily as soon as measures are discontinued which have temporarily raised the local or general vitality, or whenever some slight disturbance occurs in the gastro-intestinal tract. In 53 cases it was noted that the eruption was aggravated after taking certain articles of food, a great variety being named, including cheese, nuts, cake, sweets, pork, etc.

Prominent among the clinical features which are presented by patients with the various forms of sebaceous disorder are imperfect digestion and excretion, and a little care will demonstrate these elements in a very considerable proportion of the cases. Although many individuals will assert at first that they are in perfect health, and will be solicitous solely for the annoying or disfiguring eruption, careful investigation will demonstrate that such is not the case, and they will constantly acknowledge that the eruption is worse as they suffer from one or another of these departures from health, and in the progress of the case the relation between the two may be constantly observed.

The most frequently-occurring disorder is that of constipation, or faulty bowel excretion and evacuation. In many instances this will be found to depend upon deranged primary digestion, which will be considered next; in other instances the trouble appears to be mainly dependent upon faulty liver action, while in a certain proportion of patients the constipation has arisen merely from neglect, the abuse of purgatives, etc. But whatever the cause, the clinical fact stands very prominent that sebaceous disease of almost any form is greatly aggravated by a state of imperfect excretion and evacuation from the bowels, and in dozens of instances was it observed, if not noted, that the eruption was thus increased or generated anew. Almost all writers agree in regard to the influence of disorders of the gastro-intestinal tract upon acne; Hebra, however, denies their power to affect acne simplex, but considers them of importance in the production of acne rosacea.

Of the private cases of sebaceous disease the notes relating to 751 patients are sufficiently full to admit of analysis in regard to this point. Of these 337 were recorded as having constipation to a greater or less degree, 283 of these were habitually affected, and 54 were more or less troubled with the same; while in 414 cases the record was that there was regular action from the bowels. Thus, in almost 45 per cent. it was acknowledged that this function was badly performed. In how many of the cases recorded as having regular action of the bowels this was also the case it is impossible to determine, as considerable difficulty is often experienced in discovering the exact state of this function, partly from ignorance and carelessness on the part of the patient, and partly from delicacy in regard to entering into details. But the experience connected with the treatment of these cases makes it probable that this most important element in relation to the cure of the various forms of acne will often be found to be at fault. It must be remembered that there may be a daily evacuation of the bowels, and yet a very imperfect and faulty intestinal excretion. It is sometimes necessary to inquire very carefully into the matter in order to get at the exact truth.

As this constipation may arise from many different causes, much care will often be required to reach and thoroughly remove it, while in certain cases it will cease readily under tonic and other remedies which bear upon the general health and nutrition. While cathartics temporarily benefit many cases of acne, the eruption cannot be permanently removed by purgation, but the treatment should aim at removing the cause and inducing a regular, full, satisfactory and healthy evacuation from the bowels daily.

Evidences of imperfect digestion in the upper portion of the alimentary tract are also of very common occurrence in the various forms of acne. In 748 private cases notes in regard to this were made, and in 388, or over one-half, there was marked evidence of digestive disorder recorded; of these, 209 patients exhibited constant and prolonged indigestion, and in 177 this was more occasional. Of the 360 patients who claimed to have good digestion, 101 were habitually constipated, and in 16 others this was frequent enough to warrant notice.

The elements and signs of imperfect digestion here alluded to were of various kinds, and it is hardly necessary to enter into further close analysis here; they exhibited all the varieties of gastric and duodenal dyspepsia, such as heart-burn, oppression after eating, acid eructations, wind, etc., together with many of the minor symptoms of deranged stomach and liver action. Among these there were frequently recorded a coated and indented tongue, clammy, bitter taste in the mouth, especially in the morning, weariness and aching in the limbs, drowsiness after meals, and wakefulness or restlessness at night, etc.

Headache, more or less constant or oft-recurring, in various forms, was very frequently recorded—in no less than 230 among the 879 private patients. In 60 cases neuralgia was noted as a troublesome affection. Chronic sore throat was recorded in 47 cases, and post-nasal catarrh was noted in 33 cases; but both of these latter conditions were more frequently met with than this would indicate, and are, indeed, not very unusual accompaniments of acne.

Derangements in the urinary secretion are of not infrequent occurrence in patients suffering from the various forms of acne, and may often be observed to bear a more or less close relation to the condition of the eruption present. These disorders are mainly of the functional variety, and not associated with structural disease of the kidney; this latter was comparatively seldom met with in the cases here analyzed.

These urinary alterations do not generally attract the attention of the patient, but are readily recognized on chemical and microscopical examination. My notes contain records of 174 separate analyses of the urine relating to 69 patients. In these the specific gravity varied from 1.006 in the night urine of a lady with acne rosacea, to 1.040 in the night urine of a young lady with typical acne indurata; the former contained a trace of albumen, the latter was not otherwise abnormal, the morning specimen from the latter patient standing at 1.020. The average density was generally in excess. Taking from 1.016 to 1.021 as a normal specific gravity, in 28 patients with acne rosacea the urine was above the latter point in 47 specimens out of 73; of these, 31 were of the night urine and 16 of the morning. In a very considerable number of cases the urine passed on retiring stood at 1.026 or over. In 21 cases of acne simplex, out of a total of 44 specimens of urine the specific gravity was over 1.021 in 26 specimens. In acne indurata and sebacea the specific gravity averaged much lower than in the forms mentioned.

Of microscopic urinary deposits, in 66 samples of urine from patients with acne rosacea, 26 presented oxalate of lime, 17 urates, and 13 uric acid; in 91 samples of urine from other forms of acne, oxalate of lime was observed in 18 specimens, urates in 15, and uric acid in 6 specimens. In all these instances the amount of crystaline deposit was sufficient to warrant attention; many other specimens, in which a small amount only was discovered, are omitted from this calculation.

It is understood, of course, that it is not intended to convey the idea that all patients with acne present these urinary symptoms, for these analyses were made mainly in cases which presented clinical features suggesting the desirability of examination, and they date back, some of them more than twelve years; they are therefore from picked cases; but, in conjunction with what may be noted on close observation, they go to show that the assimilative derangements which are so often observed in acne, manifest themselves in the urinary secretion as well as in that from the bowels.

Subjective symptoms, pointing to deranged kidney secretion, are not commonly spoken of by acne patients, but may often be discovered on inquiry. Of

61 patients, whose notes were more or less complete on this subject, it is recorded that 39 complained of being obliged to rise at night to urinate, and 5 were troubled with frequent micturition during the day; 15 had noticed urinary deposits, and 2 remarked the unnaturally high color of the urine. Of these 61 patients, 8 were included in the previous mention of urinary examination, leaving 53 to be added to the 69 previously mentioned, giving a total of 134 out of 879 private patients with acne, in whom some of these departures from health were noted. From my experience in treating cases of acne, I feel confident that this proportion would be increased many times if all cases could be carefully watched and studied in regard to this matter.

Among the clinical features which a little care will discover in many patients with acne may be mentioned a greater or less departure from the normal character of the sleep. When first asked in regard to sleep, patients will often answer that it is good, and frequently add "too good;" by this latter expression it is generally meant that there is more or less drowsiness at times, a very heavy, unnatural sleep, and a great indisposition to rise in the morning. When further questioned closely, it will frequently be found that they have many deviations from normal, sound, and refreshing sleep; patients will find it hard to go to sleep, will wake in the night and remain awake, will be harassed by distressing or annoying dreams, or will awake unrefreshed and tired. Under proper treatment, directed to the cure of the acne, the observation will be continually made that these troublesome features disappear, and that the sleep has become natural and life-restoring. Of 595 cases in which I find record as to this feature, 347 patients were said to have good sleep, 83 had fair sleep, and in 165 cases, or nearly 28 per cent. of all, the sleep was other than normal.

I may add, that I find considerable difference in regard to this matter in my earlier and later notes; in those made during the last few years, since the subject has attracted my attention, more than 40 per cent. of the cases failed to have proper and healthful sleep.

Disturbances of circulation are of common occurrence in patients coming under treatment for acne. These are manifested by cold feet and hands, frequently with cold, clammy sweat, and sometimes with burning and dryness, flushing of the head and a burning pain on the crown, palpitation of the heart without exertion, as at night, cold, chilly sensations while warmly covered in bed, vertigo on suddenly rising, fainting seizures, etc. Of the cases here analyzed, it is recorded that 80 suffered from cold or clammy hands or feet, or both, and in 73 cases some of the other symptoms alluded to were noted.

The evidences of disordered digestion, assimilation and secretion, which have been mentioned, are mainly observed in the more severe and rebellious cases of acne, as might be supposed, and are more frequent in acne rosacea and indurata than in the simplex variety. They are also seen to a considerable extent in those exhibiting functional sebaceous disorders at all severely. In young subjects with acne simplex, it is often difficult to detect them, they will so commonly claim to be, and indeed appear to be, in perfect health. In some cases it seems impossible to discover any cause for the acne other than simple debility, which will manifest itself in a very slight degree in the derangements which have been mentioned, which in turn pass away with the eruption when the general debility is removed.

We come now to consider the relation between sexual derangements and diseases of the sebaceous glands, and the influence of the former in their production. The connection between the occurrence of the papules and pustules of acne and sexual disorders has been long recognized, and various writers dwell upon it with different degrees of emphasis; some exalt them to a very prominent place in its etiology, others regard them as but of secondary importance, or almost ignore their effect. The truth undoubtedly lies between the two extremes, and, while in a large share of the cases this element of causation does not exist, in other and particular instances it is of the utmost significance.

"Matrimonium varos curat" is the dictum with which Plenck closes the consideration of vari or ionthi; this statement remains tolerably true in regard to acne simplex, for this eruption is presented for treatment comparatively seldom in married persons. Of 380 cases of acne simplex in which this point was recorded, 338 were single, and but 42 married; of the entire number 85 were males of whom but 5 were married, and 295 females of whom but 37 were married. But these figures do not by any means represent the exact truth in regard to the effect of matrimony, for undoubtedly many individuals have the eruption thereafter, as may be everywhere observed, but pay little or no attention to it, whereas during younger life its occurrence is often a serious annoyance. Hebra, in dissenting from this assertion of Plenck's that matrimony cures acne, substitutes for it the expression "tempus varos curat," indicating that in the course of time the tendency to inflammation of the sebaceous glands ceases, whether the individual is married or is living in a state of celibacy.

That marriage does not prevent inflammatory affections of the sebaceous glands is shown further by the statistics of acne rosacea, where, of 233 cases, 132, or 56.5 per cent., were in married persons; of these there were 32 married men to 23 single, and 100 married women to 78 single. In 3 cases of acne rosacea in females, the eruption first appeared, and in one case it became worse, directly after marriage. In acne indurata the figures stand between these two, namely, 20 married to 83 single persons. Of the cases of functional sebaceous disorders in those of marriageable age, the preponderance was among those who were married.

Although the actual marriage state does not appear to have much effect upon the occurrence of acne, it is undoubtedly true that unnatural sexual life may and often does have much influence in its production. Perfect continence and a pure life are not a cause of acne, nor is normal sexual intercourse a cure for it; but abnormal sexual excitement and unhealthy and imperfect sexual hygiene undoubtedly can produce it. Masturbation in either sex is a cause well recognized by many writers, both on the subject of acne and on nervous and sexual disorders. Statistical proof of this point is extremely difficult to obtain, but the fact is thoroughly established by many reliable observations, and should always be borne in mind in intractable cases. But, on the other hand, too much stress should not be laid on this point, for such a causation is very rare. Milton states that among quite two thousand cases of spermatorrhœa he found only one patient suffering from acne rosacea, and not more than thirteen with acne, and only two of these with it in a severe form.

Comparatively little attention has been given to the possible genital derangements in the male subject which may cause acne by reflex irritation; but Sherwell has recently called attention to the fact that chronic urethral irritation may be a cause for the eruption, as he had observed in two cases of acne rosacea, which yielded after the repeated passage of urethral sounds. It is stated by Rigler, that although acne is common enough in the Orient, both among those of the white and colored races, it is very seldom seen in eunuchs, whose skin is dry and relaxed (Pruner).

In regard to the connection between sexual disorders and acne in the female sex, we have very much that is important and definite. The majority of writers recognize the causal relationship, and the apparent connection between the two is also a matter of popular observation and belief. But the true etiological relation between genital disturbances and the eruption of acne have never been fully determined, and the investigation is beset with some difficulty. It is well recognized that thousands of females suffer from the disorders which are commonly regarded as causative of acne, without the occurrence of the eruption, while in very many cases of diseases of the sebaceous glands no sexual disturbances can be discovered, even on careful investigation. Again, many of the female difficulties which are thought to be productive of acne are of the varieties termed functional, and are often found to depend largely upon disorders of the chylo-poetic viscera, producing uterine and ovarian congestion. The question therefore arises whether both the acne and the uterine disorder are not determined by the same cause, in many instances at least. On the other hand, the very frequent observation of the appearance or increase of the eruption at each menstrual epoch, the persistance of the eruption in certain cases until some mechanical uterine difficulty is removed, and appearance or aggravation of the eruption during pregnancy, as has been especially noticed by Hebra, and which I have observed in six cases, all point to a definite relationship between the condition of the reproductive system and acne. It may be mentioned that some writers, as Hardy, and Milton, deny all such connection, and regard sebaceous disorders as entirely local affairs, unconnected with any internal derangement or disease.

TABLE IV.

MENSTRUAL DISORDERS IN 510 PRIVATE PATIENTS WITH ACNE.

| VARIETY OF ERUPTION. | Number of Patients. | Menstruation Normal. | Occasionally Deranged. | Habitually Deranged. | TOTAL DERANGED |
|---|---|---|---|---|---|
| Acne simplex........ | 172 | 56 | 25 | 91 | 116 |
| " indurata........ | 39 | 11 | 3 | 25 | 28 |
| " rosacea ........ | 132 | 65 | 10 | 57 | 67 |
| " sebacea ........ | 52 | 24 | 7 | 21 | 28 |
| Mixed forms.......... | 115 | 35 | 15 | 65 | 80 |
| | 510 | 191 | 60 | 259 | 319 |

In the cases here analyzed, records regarding the uterine element are found in the notes of 510 patients. Of these the menstrual function was stated to be normal in 191, occasional disturbances were recorded in 60, and habitual derangements were recorded in 259 patients, as shown in the accompanying table.

In reference to the nature of the uterine or ovarian disease which gave rise to these disorders in menstruation, it would be impossible to make any definite statements, as the patients were regarded purely from a dermatological standpoint, and in a large share of the instances only the subjective symptoms were considered, and in but few cases was it known what the internal conditions really were. These cases presented all possible deviations from health in this respect; amenorrhœa, dysmenorrhœa and menorrhagia in various degrees were constantly recorded; displacements, ulceration of the os, endometritis and pelvic cellulitis were occasionally reported; ovarian congestion and neuralgia were frequently recognized, and leucorrhœa was noted as a common event, together with the many aches and pains and distressing conditions recognized as associated with and dependent upon deranged menstruation.

The records of these cases are full of notes relative to the connection which these disorders bore to the eruption on the face. Thus, in 79 cases, it was recorded that the eruption was generally worse during each menstrual epoch, and in 5 of these the eruption appeared only at this period; in 52 cases it generally became aggravated before the appearance of the menses, and in 14 cases it was worse after the occurrence of the monthly flow; a total of 145 cases where the connection between the two was recorded. In 9 cases it was noted that the eruption was better before, during or after the period. In very many instances the records of the variation of the eruption with the changing condition of the menstrual element are most interesting and instructive; the note was continually made that the two improved coincidently, or that when the acne was found to have become worse, or to have recurred, menstrual disturbance had also returned. In the large majority of these cases the treatment employed was by no means gynæcological, but the relief was obtained by general hygienic and therapeutic measures, occasionally aided by vaginal injections, counter-irritation over the ovaries, or such other simple means; in a few cases special local treatment was given by gynæcologists in addition to that employed for the eruption.

In regard to the effect of the *menopause* upon the occurrence of acne, the opinion is very common that the eruption is frequently occasioned thereby, or at least aggravated by this state. Many writers also state that acne rosacea is particularly apt to occur at this time, and to be in a considerable measure dependent upon the change of life. Danlos alludes to the frequency of the eruption at this period as a well-recognized fact, and explains that the habitual congestion of the face, which leads to headache, vertigo, ocular troubles, and flushes of heat in the head, is the principal cause of the cutaneous affection.

Among the cases of acne rosacea here analyzed, 54 occurred in females over forty years of age; of these 46 were married, 2 were widows, and 6 were single. Of these 54 cases there were notes in regard to the menstrual condition in 45 patients. In 26 patients the menses were recorded as still regular and natural, and in but 7 cases the menopause had fully occurred in women aged respectively forty-eight, fifty, fifty-two, fifty-three and fifty-four years; in only two of these did the eruption appear at the time of the change; in one case it began 7 years before, and in another 7 years after the cessation of the menses, and in several other cases from 1 to 4 years after the menopause. In 12 of the 45 cases symptoms of deranged menstruation were recorded, which might or might not be attributed to a beginning of this epoch; in but four of these, however, was it noted that the menses were "becoming irregular."

Among 500 women at the change of life, whose cases were analyzed by Tilt, there were no cases of acne rosacea recorded; but 4 cases were noted as having "erysipelas," and 18 others with "undetermined cutaneous eruptions." Some of these may have had acne in some form.

One more cause of acne in certain individuals may be mentioned, namely, the internal use of iodine and bromine and their preparations. In certain individuals an eruption will appear each time that these drugs are taken, even in small quantity, while in others only large and continued doses will thus affect them, while others still may take almost any quantity with impunity.

We come now to the third class of causes of acne, namely, the effect of local agencies in producing the eruption. Upon this subject the very greatest difference of opinion will be discovered in the literature of dermatology. Cazenave asserts most positively: "Acne is never an exclusively local malady. The clinical observation has never been made, as far as I know, of a single well-proven example of acne produced solely by an external cause." He repeats the same assertion in regard to acne rosacea, adding, "No irritant application to the face is capable of producing acne rosacea."

Many other writers, however, dwell with varying degrees of emphasis upon the effects of local causes of acne, and almost all agree that they have more or less power in producing the eruption. Their agency has in the past undoubtedly been greatly exaggerated, and more careful observers of modern times are attributing to them less and less of importance; and the assertion of Cazenave is undoubtedly true, that acne cannot be produced exclusively by any local means.

But certain local elements are, without doubt, of importance in connection with the causation and increase of the eruption, as clinical observation will abundantly testify.

Changes of temperature have long been recognized as having a decided effect in the production and aggravation of acne, and coachmen are often spoken of as particularly subject to the rosaceous form. It is questionable, however, with regard to this particular class of persons, whether the eruption is not occasioned quite as much by their frequent dram drinking as it is by the effects of temperature. It is certain, nevertheless, that all causes which produce repeated congestion of the face predispose to acne, and greatly aggravate it when present; very many of the cases here analyzed exhibited this feature time and again on coming from a cold to a warm place; also after exposure to the wind or to the sun, as when boating, etc.; in 76 patients these elements were of sufficient importance or degree to call for special note.

Climate is also seen occasionally to have considerable effect in exciting acne, or in increasing the eruption when present. In fifteen cases it was recorded that the eruption first appeared or was made worse on or after sea voyages, or at the seashore; but this fact was observed very much more frequently than this, so that it is common each autumn to see cases which bear testimony to the effect of this influence during the summer. Most cases of acne are improved by mountain air, although in three instances it was recorded that the eruption was worse in the mountains; here, however, there may have been other prejudicial influences at work.

Occupation has been credited with the production of acne, and in occasional instances the influence of this factor is very strikingly manifested. Any occupation which induces repeated or prolonged congestion of the head may be the means of exciting or aggravating acne; thus, one of the worst cases of acne rosacea among those here analyzed was in the person of a young woman who was engaged in a shoe store, and the continued stooping position rendered her disease practically incurable. Whenever she relaxed from her work, the eruption would respond perfectly to treatment, but a return to her occupation invariably caused its return in full degree. Another excessively severe case of acne indurata was in a blacksmith, whose experience was similar. In many instances it was noticed that an acne was aggravated or even redeveloped by the attempt to engage in kitchen work over a hot range, etc. Acne of all kinds may often be observed to be aggravated by sitting with the head bent forward, as in sewing or reading, especially in the close proximity to a hot light; in this position a double cause is found in the obstructed return of blood from the head and in the direct heat to the face. These patients should always be directed to sit erect, and with the back to the light.

There is one local agent which is well recognized as capable of exciting sebaceous inflammation, which, however, so rarely occurs that it can hardly be recognized as a cause of acne; this is tar, whether applied medically for other diseases, or accidentally in the arts and sciences.

The effect of other direct local agents in the production of acne is not so easy of demonstration; many assertions are made by writers in regard to the effects of cosmetics, and patients frequently charge eruptions of acne as due to the use of advertised nostrums. But the question always arises as to the reason for the employment of these cosmetics, and it is more than probable, in most instances, that the eruption existed to a greater or less degree before their use, and that, the causes being neglected, they naturally increased, while obstruction of the orifices of the glands, together with over-stimulation by their use, led to an aggravation of the existing trouble. Among the cases here analyzed, there are notes of but five who attributed the eruption to cosmetics, one of these being stated to be from Oriental cream, another from Rimmel's face powder, and in three the agent was not noted.

In regard to the dangers from the use of advertised cosmetics and lotions, it may be stated that, while it is questionable if acne is often caused by them, a number of authenticated instances are on record where serious symptoms of poisoning have been recorded from their use (Rosenthal, Hutchinson, Schenck, Holland, Nagle). These applications contain mainly mercury or lead, and not infrequently in very considerable quantities. In three patients the eruption of acne rosacea followed the wearing of a long crepe veil, and in one or two of these the irritant effect of this was very marked and decided; in one instance in particular the veil became wet and frozen to the face, and the irritation produced thereby was very great, and was continued in the form of rosaceous acne.

It is a common event to have an eruption of acne become much aggravated, for the time being, by measures and applications which have been prescribed medically; but in this case we are not right in regarding this as a production of the eruption by local means, for it is only stimulating to greater intensity of inflammation lesions which have already existed; it often also occurs that comedones which had no inflammatory action, or even were hardly visible, are excited by local measures to the formation of papules and pustules.

## ARTICLE III.—COMPLETE LACERATION OF THE PERINÆUM, INVOLVING THE RECTO-VAGINAL SEPTUM, OF EIGHT YEARS' STANDING. By A. B. COOK, A.M., M.D., formerly Professor of the Surgical Diseases of the Genito-Urinary Organs and Rectum in the University of Louisville; late Professor of Surgery and Clinical Surgery in the Kentucky School of Medicine, Louisville, Ky.

The lady who had the misfortune to meet with the above-named accident is a resident of southwestern Missouri, surrounded with the comforts of life and the pleasures of a good home. On the 19th of November, 1884, she consulted me. She is thirty-six years of age, of average size, with muscles well developed, and the mother of six children. General health good, with exceptional attacks of intermittent fever. About eight years ago, at the birth of her fourth child, she was attended for the first time by a midwife, who was engaged as a nurse only, but who, in the absence of the family physician, conducted the accouchement. From the first the pains were active and almost continuous, and the labor terminated in ten hours. The child weighed nine pounds and eleven ounces, the head being larger than that of any previous child; and from conception to birth, by her count, the pregnancy lasted ten months. The second stage of labor was rapid, the pains being hard, and perhaps stimulated by hot teas given to hasten delivery. With a large head, rigid perinæum, continuous expulsive pains and rapid delivery, the result was complete perineal laceration. The accident was not detected at the time, although the patient knew a few hours after that something unusual had happened. On the tenth day she got up, but was unable to stand or walk without pain, and this condition continued for six months; after which time she suffered no special pain, except during or after unusual exertion or stooping over. After the accident she had no control over the alvine evacuations.

Since then she has given birth to two healthy children, at the delivery of each of which the family physician officiated; the first being born two years and eight months after the occurrence of laceration. The second child, at the time she consulted me, was thirteen months old and had been weaned one month—in anticipation of and preparatory to the operation.

An examination disclosed complete laceration of the perinæum, sphincter ani muscle and about one inch of the recto-vaginal septum. The patient having weaned her babe, being in good physical condition, and not expecting menstruation for six weeks, I decided to operate as soon as she recovered from the fatigue of travel and became habituated to her new abode.

She was ordered, for the first two days, fifteen grains of the bisulphate of quinine daily, in five-grain doses, at intervals of three hours; then five grains night and morning. Nov. 25th I ordered the following mixture:

| | | |
|---|---|---|
| ℞. | Castor oil | ℥ ss. |
| | Glycerine | ʒ ij. |
| | Oil of cinnamon | gtt. iij. |

M. S. To be taken at one dose.

This thoroughly evacuated the bowels.

On the forenoon of Nov. 26th, after anæsthesia with chloroform, she was placed in the position for lithotomy and the operation performed.

The circatrices of the perinæum and sphincter muscle were first thoroughly removed with scalpel and scissors, the edges well beveled to give a fresh surface for adhesion, and the edges of the recto-vaginal septum pared.

After the hæmorrhage was arrested, the parts were brought together by seven silver-wire sutures, each about ten inches in length, the edges of the septum being first adjusted with two sutures. Of the fine perineal sutures, the first was introduced below or at the verge of the anus with Fischer's long-curved perineal needle armed with the suture, penetrating the skin on the left side one inch from the edge of the wound, and sweeping the circle of the sphincter ani muscle, and passing through the recto-vaginal septum between the sutures in the septum, being carried around the right side until it emerged one inch from the edge of the wound. The second and third sutures were introduced in a similar manner, about half an inch apart, the second passing through the septum just below the lower septal suture, and the third at about the junction of the septum with the sphincter. The fourth and fifth sutures closed the upper portion of the wound by passing through the lower part of the labia, a situation corresponding to the virgin fourchette. The sutures were then separately tightened, commencing with the lowermost, and made fast by twisting the ends with forceps; neither perforated shot, lead nor ivory plates being used. The superfluous ends were then clipped off, the thighs secured by a roller bandage above the knees, and the operation was completed. As soon as the patient recovered from the anæsthetic, half a grain of morphia was given to quiet pain and lock up the bowels. On the morning following the operation menstruation came on, and this continued for four days. During this time, and for three days after its cessation, although there was at no time any special elevation of temperature, she was restless, and suffered constant pain about the abdomen, hips, legs and joints, which required frequent change of position. The perinæum looked red and angry, but there was no more swelling than is usual in deep-sutured wounds, and no necessity for puncturing, scarification, or loosening the sutures, as is sometimes required when the quill suture is used. She took quarter and half-grain doses of morphia *pro re nata*, averaging two grains in twenty-four hours. On December 3rd two of the middle perineal sutures—second and third—were removed; December 4th, the first and fourth; December 5th, the fifth, and the parts were then left undisturbed. The second day after the removal of the sutures a little pus oozed from the perineal wound, and a careful examination showed non-adhesion of the skin and subcutaneous cellular tissue, due, no doubt, to the inflammation. The granulations were numerous and healthy, and the wound in good condition for union. The thigh bandage was tightened, and the patient was enjoined to lie on her side, and not to change position in my absence. The perinæum was bathed with a carbolized solution to prevent the invasion of vaginal secretions, and in a few days the skin had united. December 12th the two vaginal sutures were removed, and complete union was found, with retraction of the posterior vaginal wall. After taking morphia for six days, she complained of nausea, and vaginal suppositories, each containing two and a half grains extract of opium, were ordered. Two to four of these were used at intervals daily, as required, and, having a beneficial effect, they were continued until December 15th. During the menstrual flow two daily vaginal injections of warm water were used, followed by two ounces of the following injection :

| | | |
|---|---|---|
| ℞. | Carbolic acid | ʒ ss. |
| | Glycerine | ℥ iij. |
| | Distilled water | ℥ v. |

When menstruation had ceased, hot-water injections were substituted, to cleanse, soothe irritation and contract the relaxed vaginal walls, and this added greatly to the comfort of the patient.

The bladder was evacuated at intervals of six and eight hours with a long male gum catheter. This is to be preferred to the ordinary short female catheter, unless gum tubing be attached to the latter.

After the menstrual flow the bladder became irritable, requiring the use of the catheter every three or four hours, and on three or four occasions spasmodic action caused involuntary urination. Fortunately, no harm resulted, as the hot-water injections, followed by the carbolized mixture, were used immediately after. On December 9th I used Dr. Goodman's self-retaining gutta-percha catheter with six feet of gum tubing attached, which evacuated the urine as soon as secreted, and after the removal of this catheter, December 17th, the urine was retained all night without discomfort. For spasmodic pain at the close of urination the fluid extract of corn silk was given, one teaspoonful in water three times a day ; but after three days she complained of the dose causing dizziness, and half the quantity was ordered. December 25th I substituted the following :

| | | |
|---|---|---|
| ℞. | Potass. bicarb | ℥ ss. |
| | Acid. citric | ʒ ss. |
| | Tr. hyoscyami | ℥ ss. |
| | Aquæ dest. | ℥ iss. |

Ft. sol. S. A tablespoonful in a gill of water every four hours during the day.

No repetition of the prescription was necessary.

Gaseous distension of the stomach was relieved with bicarbonate of soda, 15 to 20 grains, with 20 drops of the essence of peppermint, in water ; gas in the rectum was drawn off by introducing a No. 12 English gum catheter, the infrequency of the accumulation not justifying the insertion of a permanent tube.

December 16.—Removed the knee bandage and gave an enema of half a pint of warm water, which was followed by two soluble evacuations with very little pain. The enema was repeated the next morning, and afterward discontinued. On the 18th she was dressed and sat up. During the three weeks the bowels were locked up she experienced no inconvenience, except from occasional gaseous distension, which was easily controlled by the means above stated. No hardened feces accumulated, and no laxative was given at any time after the operation. A bi-digital examination, made by passing the index finger into the rectum and the thumb into the vagina, enabled me to feel a complete vaginal septum—the united sphincter firmly contracting around the finger—and a dense perinæum. There was a marked contraction of the vagina as far as the apex of the septal cicatrix, now retracted up the length of the index finger. Before she left for home, on the 1st of January, the uterus, which had been partially prolapsed, with the os resting on the floor of the vagina, had regained its normal position.

Eight to ten grains of the bisulphate of quinine were given daily till December 21st, when Fellow's hypophosphites was ordered in teaspoonful doses at meal times. The skin and kidneys acted freely, perspiration being at times profuse, but now prostrating. The use of Vichy water allayed thirst and prevented undue acidity of urine. Her diet for three weeks consisted of essence of beef prepared daily from fresh beef steak, milk and ice cream, and she was advised to take as much of this nourishment as she could digest; selecting the time and kind of food according to taste and inclination, guided by prudence.

The opiates suspended all peristaltic action ; hence there was no desire or effort to defecate. The solubility of the bowel-contents was probably due to the diet, Vichy water, and bicarbonate of soda.

The question might be asked, Do we not sometimes ascribe unfavorable symptoms to compulsory or medicinal constipation which are due to other local or systemic causes ? Again, cannot the system, by opiates and proper diet, be disciplined to endure constipation, not only without detriment, but greatly to the advantage of the patient and the success of the treatment ?

Several years ago, in a report on operations for urinary calculus, I called attention to the importance of quininizing the patient prior to an operation, and keeping up the influence of the drug until convalescence had established. Experience has confirmed the value of this practice; I believe patients do better, rally quicker from shock, are less liable to traumatic fever and sepsis, and recover more rapidly under this treatment than they would otherwise.

By surgeons and practitioners familiar with the operation my comments on this case may be deemed unnecessary and tedious ; but my paper is written more especially for the younger professional men, who do not find in any one standard work the little details which in many cases must be rigidly carried out to ensure success. To the latter I would say, in every capital operation, or one like the subject of this paper where adhesion by first intention is necessary, always, if possible, prepare the patient well beforehand, select reliable assistants, and give the anæsthetic in charge of an assistant who will not neglect his trust to watch the progress of the operation. I am disposed to believe that life has been sacrificed by inattention; interest in the operation taking precedence of attention to the condition of the patient. Until nature furnishes the surgeon with four hands and extra eyes, and he can learn to do two important things at the same time, be careful who you select to administer chloroform.

Never operate against time, do your work well and carefully, attend to the minute details yourself, and never trust any local or delicate manipulation to the nurse. A little omission or an awkward movement may defeat success, and the profession and patient will hold you alone responsible for failure. I tender my acknowledgements to Drs. Bolling, Kalfus, Ronald and Satterwhite for assistance in this operation.

## RÉSUMÉ OF ORIGINAL ARTICLES

### IN OTHER JOURNALS.

### English Cholera Commission.—The Relation of Bacteria to Asiatic Cholera.

The following is an abstract of an important communication read before the Royal Society, February 5th, 1885, by Dr. Klein, F.R.S. (*British Medical Journal*):

Dr. Klein said that he proposed to bring before the Royal Society the results of an inquiry into the etiology of Asiatic cholera, undertaken, at the instance and expense of the Secretary of State for India, by himself, Dr. Gibbs and Mr. Alfred Lingard, while in India. This investigation would be published *in extenso* by the India Office, but permission had been granted to bring to the notice of the Society some of the more important points of the inquiry, particularly those regarding the relation of bacteria to Asiatic cholera. He also gave the results of further observations made since the return of the Commission from India.

As is now well known, Dr. Robert Koch, in an extensive inquiry into the etiology of cholera in Egypt, Calcutta and in France, 1883–84, undertaken by him, Drs. Gaffky and Fisher, at the instance of the German Government, has arrived at certain conclusions, which, briefly stated, are these:

1. In all persons suffering from Asiatic cholera, there occur in the rice-water stools during the acute stage of the disease certain well-characterized bacteria, which, on account of their curved shape, Koch called "comma-bacilli."

2. These comma-bacilli are mobile rods, of small size, of about the same thickness as tubercle-bacilli, but only of half their length; they are always more or less curved, sometimes as much as to form half a

circle; they vary in length according to the state of growth; they occur either singly or in couples, in the latter case arranged like an S.

3. The comma-bacilli occur in great numbers in mucus-flakes as well as in the fluid of the choleraic evacuations. They occur in the lower part of the ileum of persons dead in the acute stage, almost to the exclusion of other bacteria, and in such great numbers that the lower part of the ileum may be considered to contain almost "a pure cultivation of comma-bacilla."

4. The mucous membrane of the ileum, particularly that of the lower part, around and in the lymphatic glands located here—the solitary and Peyer's lymph-glands—exhibits in typical and rapidly fatal cases characteristic alterations; loosening and detachment of the epithelium of the surface, and of that lining the glands of Lieberkühn; swelling and congestion of the blood-vessels of the mucous membrane, particularly at the peripheral portions of the lymph-glands. These alterations are due to the presence, growth and multiplication of the comma-bacilli in these tissues, and the disease cholera is caused by the production on the part of these comma-bacilli, and by the absorption on the part of the system, of a special chemical ferment.

This state (the presence of the comma-bacilli in the tissue) is most pronounced in the lower part of the ileum; higher up it is more limited, gradually diminishes, and finally disappears in the upper part of the small intestine.

5. The blood and other tissues are free of any organisms.

6. The comma-bacilli grow well outside the body at the ordinary temperature of the room, but better still at higher temperatures up to 38° or 40° C. They divide transversely; after division, the two parts may remain joined end to end in the shape of an S; and, by further division, they may grow into a spiral-like or wavy form. They grow well in the mucus-flakes taken from the intestine, and placed on linen kept in a moist cell; they grow well on potato, in broth, in Agar-Agar jelly, in solid nourishing gelatine mixtures (gelatine, peptone and beef extract). In this latter substance they exhibit a peculiar and definite mode of growth not seen by Koch in any other bacteria. The comma-bacilli require for their growth an alkaline medium; they are killed by acid, by drying, and various antiseptic media.

7. On account of their constant occurence in the intestines of patients suffering from Asiatic cholera, on account of their absence in all other diseases of the intestine, and on account of their peculiar mode of growth in nourishing gelatine, Koch claims for these comma-bacilli not only an important diagnostic value, but also considers them as the true cause of cholera.

8. Since his return to Germany, Koch has convinced himself of the correctness of the observations of Nicati and Rietsch, who maintain that cholera can be produced in dogs and guinea-pigs by injecting directly into the small intestine of these animals the comma-bacilli taken

either directly from the choleraic evacuations or from artificial cultivations.

The investigations of the English Commission have led to the following conclusions :

1. Koch's statement as to the constant occurrence of comma-bacilli in the rice-water stools of cholera patients is correct ; the comma-bacilli vary greatly in numbers in different stools and in different cases, in some being exceedingly scarce, in others numerous.

2. These comma-bacilli vary greatly in length, some being twice and three times as long as others, some well curved, as much as to form half a circle, others showing only a slight bend. The name comma-bacillus is inappropriate ; the organism is more correctly termed a vibrio.

3. The comma-bacilli occur in the mucus-flakes of the rice-water stools, as well as in those taken from the ileum of a person dead of cholera. The sooner after death the examination is made, the fewer comma-bacilli are found in the mucus-flakes ; even in typical rapidly-fatal cases, the mucus-flakes taken from the ileum, and examined soon after death (from between fourteen minutes to an hour or an hour and a half), contain the comma-bacilli only very sparingly indeed, and not to the exclusion of other bacteria. Our investigations do not bear out Koch's statement as to the lower part of the ileum being, in acute typical cases of cholera, almost "a pure cultivation of comma-bacilli." In not one of the many post-mortem, examinations of typical acute cases have we found such a state.

4. The mucus membrane of the ileum, in typical rapidly-fatal cases, if examined soon after death, does not contain in any part any trace of a comma-bacillus or any other bacteria, not even in the superficial loosened epithelium. If the post-mortem examination be sufficiently delayed, comma-bacilli and other bacteria may be found penetrating into the spaces of the mucous membrane. Koch's theory as to the comma-bacilli present in the mucous membrane secreting a chemical poison inducing the disease cannot, therefore, be correct.

5. Neither the blood nor any other tissue contains comma-bacilli or any other micro-organisms of known character.

6. The behavior of the comma-bacilli in artificial media is not such as to justify their being considered as specific. They grow well in alkaline and neutral media, are not killed by acids, and their mode of growth in gelatine mixtures is not more peculiar than that of other putrefactive bacteria ; they show marked difference when grown in different media, but not more so than the ordinary putrefactive bacteria when compared in their growth with one another. The comma-bacillus of the mouth shows the same peculiar character of growth in gelatine as Koch's comma-bacilli.

7. Koch overlooked the fact that "comma-bacilli" occur in other intestinal diseases, in the mouths of healthy persons, and, as shown

recently, even in some common articles of food. (By Dr. Deneke in stale cheese.)

8. The experiments performed by Koch and others on animals do not in the least prove that the comma-bacilli are capable of producing cholera or any other disease. The results obtained by them are much more easily explained in an opposite manner.

9. There is direct evidence to show that water contaminated with choleraic evacuations, and containing, of course, the comma-bacilli, when used for domestic purposes, including drinking, by a large number of persons, did not, in the case of the tanks near the Jelepara Lane, produce cholera.

10. The mucus-flakes taken from the small intestine of a typical rapidly-fatal case of cholera contain numerous mucus-corpuscles filled with peculiar minute straight bacilli; in this state they are found when the examination is made very soon after death; soon, however, the mucus-corpuscles swell up and disintegrate, and then their bacilli become free. The small bacilli are never fixed in the mucus-flakes. They are one-third or one-fourth the length of the comma-bacilli, and about half their thickness. They are non-mobile; they grow well in Agar-Agar jelly, but show in their modes of growth no peculiarity by which they could be considered as specific. When grown on the free surface of the nourishing material they form spores.

11. These small bacilli are not present in the blood, in the mucous membrane of the intestine, or in any other tissue.

12. Experiments made with these small bacilli on animals produced no result.

13. Since my return to London I have ascertained that the comma-bacilli of cholera show two distinct modes of division, one the known one of transverse division, and a second one of division in length. When growing in Agar-Agar jelly at the ordinary temperature of the room, after some days the bacilli swell up, owing to the appearance in their protoplasm of one or more vacuoles; as these vacuoles increase, so the comma-bacilli become gradually changed, first into plano-convex, then into oblong bi-convex, and ultimately into circular corpuscles. The longer the original comma-bacillus, the larger the final circle. These circular organisms are mobile, just as are the comma-bacilli; and, by disintegration of the protoplasm at two opposite points, two perfect more or less semicircular comma-bacilli are formed. Growing the comma-bacilli in Agar-Agar jelly kept at higher temperatures (30° to 34° C.), the comma-bacilli multiply by transverse division only; but, transferring these to Agar-Agar jelly, and keeping this at the ordinary temperature of the room, they again change into circular organisms, which, by division in the diameter of the circle, form two new comma-bacilli.

A Case of Porro's Operation.—Dr. Fancourt Barnes reports in the *British Medical Journal* a case of Porro's operation, which, he says, as far as he knows, is the sixth that has been done in England.

The patient, age 28, primipara, was sent into the British Lying-in Hospital, on September 10th, 1884, by Dr. Pearce, on account of a pelvic tumor obstructing labor. He was sent for to the hospital at 9.30 P.M., and on making a vaginal examination, found the pelvis nearly completely occupied by a hard semi-solid tumor, lying behind the posterior wall of the vagina, and fixed to the sacrum. The os uteri was only dilated to the size of a five-shilling piece, although the patient had been forty-eight hours in labor, and said that the liquor amnii had escaped soon after the commencement of labor. Finding that it would be impossible, owing to the narrow space between the tumor and pubes, to deliver by craniotomy without the certainty of rupturing the tumor, he endeavored to push the latter up out of the pelvis. This, however, he was unable to do, it being firmly fixed to the concavity of the sacrum. It being now clear that one or other of the Cæsarean operations would be necessary, he sent for his colleagues, Drs. Phillips, Handfield-Jones and R. Barnes. On their arrival, the patient was examined by them, and further unsuccessful attempts made to push the tumor up out of the pelvis. After consultation, it was decided to deliver by abdominal section, in the interest of the mother as well as of the child. The patient having been anæsthetized by Dr. Phillips, he proceeded, at 12.30 A.M., to the operation. An incision from one inch below the umbilicus to an inch above the pubes was made through the abdominal wall. He then made an incision about four inches in length perpendicularly down the anterior wall of the uterus. He therefore passed his hand into the uterus, seized a foot, and delivered a live male child, weighing 7 lbs. Having separated the child from the cord, he removed the placenta. The hæmorrhage from the incised uterine walls was controlled by Sydney Jones's ovariotomy clamp-forceps. The uterus, which was now empty and contracted, was drawn forwards out of the abdomen. A Kœberle *serre-nœud* was then applied round the cervix, underneath the ovaries. The *serre-nœud* was tightened, and the uterus, together with the ovaries, amputated just above the *serre-nœud*. The pedicle formed by the cervix was transfixed by two straight pins, and fixed outside the abdomen at the lower end of the incision. Some sponges, on sticks, were passed down into the pelvis, and returned unstained, showing that no fluid or blood had escaped into the peritoneum. The abdominal incision was united by silver sutures. The wound was covered over with cotton-wool; a piece of carbolised lint being placed over the stump. With the exception of the spray, the operation was performed under antiseptic precautions. The operation occupied forty minutes. The child survived, but the mother died on the fifth day of septicæmia.

The post-mortem examination was made by R. Burnet twelve hours after death. The body was that of a large, well-nourished woman, aged 28. A complete examination was forbidden; hence only the pelvis and abdominal cavity, through the incision, could be examined. The whole of the incision had united, except the lower part, where the stump of the uterus was found transfixed by the needles, and commenced to separate. The surfaces of the incision were healthy; and, when the stitches were removed, the adhesion had to be broken down. The abdominal cavity appeared healthy; there was no fluid, and no signs of peritonitis. On passing the hand into the pelvis, a large tumor could be felt, lying rather towards the left side, and about as large as a child's head, tense, and globular in form. When raised, the tumor was found to be attached to the posterior aspect of the pelvic margin by a peduncle narrow at the tumor, and spreading out on the sacrum in a digitate manner.

On removing the tumor, it was found to be a large globular semi-solid mass, with several definite thickenings in its walls, apparently cystic. On opening the cyst, it was found to contain a quantity of thick creamy sebaceous matter; a mass of hair about half an inch thick, and about the size of a penny in circumference. This mass of hair was not attached to the wall, but slid freely on a fibrous band which penetrated it. On dissection, the nodular masses in the wall were found to contain several more or less completely-developed teeth.

The following is the substance of the remarks made by Dr. Barnes on the case: Neither the operation of Porro nor the ordinary Cæsarean section is likely ever to be frequently resorted to in England, for the simple reason that in our country badly-distorted pelves are not commonly met with. It is of absolute necessity to a just appreciation of the advantages and disadvantages of Porro's operation by the profession in this country that the failures should be scrupulously published. We know that the successful cases will not be concealed. On referring to the table drawn up by Dr. Godson, I will find that out of five cases of Porro's operation in Great Britain which he has collected only two had been published—the first by Professor Simpson, in which the patient died; the second by Dr. Godson himself, in which the patient recovered. The remaining three deaths remain unpublished. And so, until Dr. Godson collected all the cases he could, the death-rate in Porro's operation in this country, gauged by published cases, might have erroneously been set down at only one in two, whereas it has really been five in six. I have mentioned this to emphasize the importance of all such cases being published. Out of the 138 operations collected by Dr. Godson, 77 deaths are recorded, against 61 recoveries. It must, therefore, at present be regarded as a most severe proceeding.

In the case I have just related I was obliged to resort to Porro's operation, owing to the impossibility of delivering the child *per vias naturales*. The pelvis was occupied by a fixed, semi-solid tumor, leaving only room for the examining finger to pass between it and the pubes to the os uteri at the brim. In performing the operation, I incised the uterus while it was still in the abdominal cavity; I then removed both the child and the placenta before drawing the uterus forward out of the pelvis. My reason for emptying the uterus of the placenta, as well as of the child, before applying the *serre-nœud* is that it allows of more perfect and natural contraction of the uterus, and thus materially facilitates the adjustment of the *serre-nœud* round the uterine neck. It further allows the cervix to be embraced by a smaller loop of wire, and so obviates the tightening of the wire too soon after its application. Müller's modification of making a large abdominal incision and then drawing the gravid uterus before incising it, seems to me a needless and dangerous complication. The object is to prevent hæmorrhage by applying a constrictor round the cervix before incising the uterus, and also to prevent blood and amniotic fluid escaping into the peritoneum. Both these accidents are easily avoided by an assistant supporting the uterus while it is being incised, and by applying pressure by clamps or the hand to the walls of the uterus until it is drawn out of the abdomen. In my case no blood or fluid ran into the abdominal cavity. Where it is considered advisable to insert a drainage-tube, I think it would be best to pass it through a small opening in the posterior vaginal pouch into the peritoneum.

The two chief dangers of the operation are: first, shock; second, blood-poisoning. It is well known that amputation through the cervix uteri is a great shock to the nervous system. Dr. Savage regards this as the chief danger in cases of hysterectomy for fibroid tumors. If the patient, however, rallies from the shock, as in my case, there is still the probability of septicæmia to be encountered. Up to the fourth day my patient did not exhibit any bad symptom, and seemed to be progressing so well that her recovery seemed assured. The prevention of septicæmia must always be difficult where we have to deal with a pedicle fixed outside the abdomen. I regard this as the chief danger after the operation, and I cannot but think that, as in ovariotomy, it would be safer to transfix the pedicle, securely tie it, drop it into the abdomen, and close up the wound, leaving, if necessary, a drainage-tube through the vaginal wall into the peritoneum. In the case I have described the presence in the pelvis of a suppurating dermoid cyst was an additional and great source of septic danger. I think that, had it not been for this complication, the patient would have recovered.

The results of the treatment of the pedicle by the intra-peritoneal method have not hitherto been more encouraging than those obtained by the usual method of securing it in the abdominal wound. It is reassuring, however, to find that of the deaths after the intra-peritoneal treatment of the pedicle not one is attributed to bleeding from the pedicle. Seeing that the dangers from septic absorption are increased by the extra-peritoneal method, this should be an argument in favor of a further trial of the intra-peritoneal treatment of the pedicle.

To conclude, we are yet far off the day when it will be possible to decide which of the three—Porro's operation, Cæsarean section or laparo-elytrotomy—affords the safest chance for the mother.

Recent Progress in the Diagnosis and Treatment of the Diseases of the Female Urethra.—Until within the past few years the diseases connected with the female urethra, says the *Maryland Medical Journal*, have remained in as much obscurity as existed in regard to uterine disease before the introduction of Sims' speculum. Indeed, the profession at large has, at the present time, but a limited appreciation of the important and distressing influence which urethral diseases exercise upon the female economy. Whilst then the diseases of the female urethra have remained a *terra incognita* to the profession at large, their importance is being fully recognized by specialists in female diseases. To Dr. Emmet undoubtedly belongs great credit for original and valuable contributions to the pathology and treatment of urethral diseases, and in the last edition of his book he treats of them in an exhaustive manner.

Dr. Emmet has doubtless expressed the true cause of our ignorance of urethral disease in the female in the statement that it was "due to a want of means of exploration." The endoscope and other mechanical appliances devised for exploring the urethra are only partial and imperfect aids to diagnosis. Some six years ago Dr. Emmet devised the plan of making a buttonhole-like opening in the female urethra for the purpose of forming a diagnosis, or for facilitating operative procedures. It has been due to the use of this method of exploration that we now have an exhaustive and practical study of urethral affections. Dr. Emmet does not now hesitate to announce the fact that this method is the only one within our knowledge to-day which fulfils every indication for exploring the female urethra. In the latest edition of his book Dr. Emmet describes fully this method of operating, and gives a number of illustrative cases showing the results of this plan of diagnosis and treatment. These clinical facts read like words of revelation, and go far to confirm the estimate Dr. Emmet places upon this method of procedure. A classification of the diseases of the urethra shows that this organ may be affected with growths and with thickening from inflammation of its mucous and sub-mucous tissues; "the canal may be dilated from before backward, and with more or less prolapse of the mucous membrane along the urethra from the bladder; its lining membrane may be diseased in part or throughout, or fissures may exist at the neck of the bladder." For these conditions we have had no efficient means to aid in forming a diagnosis until Dr. Emmet devised this buttonhole operation.

Laceration of the female urethra is a condition which, perhaps, few clinical observers have recognized; yet Dr. Emmet informs us that since his attention has been called to the subject he has found evidence of urethral laceration as common as that of the perinæum, and far more so than the injury through the sphincter ani. The result of this lesion is a too patulous urethral outlet and more or less prolapse of mucous membrane. This prolapse presenting itself at the outlet of the urethra, projecting from the upper or lower portion of the passage, or occupying the entire circumference of the canal, impedes the escape of urine from the bladder, and as the obstruction increases more or less tenesmus is constantly excited, which in time adds to the difficulty. "Ultimately the whole urethral canal becomes displaced, and pressed forward or rolled out by a prolapse of the superincumbent tissue about the neck of the bladder."

In the recognition of this condition an important advance has been made in the treatment of urethral troubles.

Urethrocele is another important subject considered by Dr. Emmet. This condition has been frequently attributed to laceration of the perinæum. Dr. Emmet attributes it to an injury of the urethra direct; the laceration of the perinæum preventing a proper support, the condition of the urethra could not improve afterwards, and becomes exaggerated in consequence. He believes in the beginning of every case of urethrocele more or less laceration has taken place between the longitudinal fibres of the urethra. This condition is easily remedied by removing the excess of tissue, and by then denuding the sides of the opening in the urethral tract to a sufficient width, so that when the two surfaces are brought together by sutures the urethral canal will be restored to its natural calibre.

In the study of "Fissures at the Neck of the Bladder," and of "Laceration of the Urethra from Dilatation," Dr. Emmet has done most excellent original work. The diagnosis and treatment of the first-named condition has been so simplified by his buttonhole operation that a distressing condition is readily brought under the control of the surgeon.

In the examination of growths on the uterine wall it has been claimed that dilatation of the urethra offers superior advantages. As is well-known, this operation is not devoid of evil consequences. Permanent incontinence after the operation will occur in a certain number of cases, as a result of lacerations of the urethra. The consequences which follow such a procedure are serious enough to give rise to doubt as to its propriety. Dr. Emmet having given most careful study to this subject, asserts that the alleged advantages in no degree compensate for the risk, particularly since an artificial opening in the base of the bladder gives equal facilities for exploration, and is attended by no such risk of incontinence.

Summing up the present status of urethral disease in the female, it may be said in a few words that great progress has been made in their diagnosis and treatment since Dr. Emmet devised his buttonhole operation, a method which has rendered the exploration and treatment of the urethra comparatively easy and successful procedures.

OUR PRESENT KNOWLEDGE OF THE RELATIONS BETWEEN MICRO-ORGANISMS AND PUERPERAL FEVER.—The following are the conclusions reached by Dr. Lomer, assistant at Schröder's Clinic at Berlin, in an article with the above title in the *American Journal of Obstetrics:* 1. Of all micro-organisms found in puerperal fever, the chain-like micrococci seem to be those to which we should especially direct our attention, and to which we should attach the greatest importance. 2. When in any case of puerperal fever their presence has been detected in the exudations, they have also been found in the deeper organs. 3. They have been found in erysipelas, scarlet fever, diphtheria and puerperal fever, and in each possess the same form, and show the same disposition towards fertilizing fluids and coloring matters. 4. Although it is very probable that different varieties do exist among these diseases, we, as yet, have no positive proof of the fact. 5. A differentiation according to size is an extremely difficult, perhaps hopeless task, but, according to manner of growth, it may be possible. 6. Vaccination with cultivations of these micrococci from different diseases has proved fatal to animals, but has given no typical or characteristic results. 7. Chain-like micrococci have also been found in infected wounds, and in the blood of pyæmic patients. 8. The pathologico-anatomical investigations thus show that these clinically-related diseases (puerperal fever, erysipelas, diphtheria, scarlet fever and pyæmia) possess similar micro-organisms. 9. Besides the chain-like form, other micro-organisms may be present in puerperal fever—*i.e.*, mixed infection. 10. The presence of these latter in the cadaver does not always prove that they existed in the living body; on the contrary, they are often the result of post-mortem decomposition. 11. It is probable that the processes of decomposition are sometimes present before death actually takes place; different varieties of micro-organisms therefore found, for instance, during the death-struggle, may have nothing to do with the cause of the disease. 12. It is, as yet, impossible to classify puerperal fever, as regards course and prognosis, according to the varieties of micro-organisms found (Doleris), or according to their mode of invasion (Frænkel). 13. In some cases no micro-organisms have been found, but this does not prove that they did not exist.

CHOLECYSTOTOMY, WITH A REPORT OF TWO NEW CASES.—In the *American Journal of the Medical Sciences*, Drs. J. H. Musser and W. W. Keen publish an article on cholecystotomy, in which they relate two new cases, with a table of all the hitherto-reported cases, thirty-five in number. The first case was that of a man, æt. 32, who had had attacks of biliary colic for five years, followed by jaundice, until he was reduced in strength, and had chills and fever threatening life. Dr. Keen attempted cholecystotomy, the incision being made over a region of dulness believed to be the gall-bladder. This dulness was found to be due to an inflammatory mass, which glued together the gall-bladder, colon and intestine. No stone could be detected. The wound was closed, and recovery ultimately followed a course of Hathorn water at Saratoga. The second case was also that of a man, æt. 31, with acute gastro-intestinal catarrh, followed by jaundice, enlarged gall-bladder, and symptoms of internal suppuration. The enlargement of the gall-bladder was demonstrated by the hypodermic needle, but the fluid was not bile. Dr. Keen performed cholecystotomy, using a large hollow-handled spatula to drain off the twenty ounces of fluid contained in the gall-bladder. The gall-bladder was found to be seven inches in depth, but neither by finger nor probe could any gall-stone or the orifice of the duct be found. A biliary fistula was established, and was discharged through it the next day. The patient died a week later of exhaustion. The post-mortem examination revealed inflammatory closure of the cystic and common ducts at the mouth of the gall-bladder and at the duodenum. Dr. Musser, in his medical comments, analyzes at length the causes, symptoms and diagnosis of biliary obstruction, under the heads of jaundice, tumor, pain and suppuration, especially in relation to gall-stones and other foreign bodies and diseases of the ducts. He points out the means by which a just conclusion may be reached, and that cholecystotomy should be resorted to early in the case rather than wait till the blood is disorganized and the liver softened and made functionally useless. Especially is this true in view of the low mortality of the operation, there having been (excluding Gross' incidental case) only nine deaths in thirty-four operations, and of the fact that Mr. Tait has done thirteen operations, by far a larger number than any other operator, all of which have been successful. In his surgical comments, Dr. Keen discusses the surgical means of diagnosis by aspiration, with or without probing through canula, and by acupuncture, both of which, when properly done, he commends. He also strongly urges an early laparotomy, followed at once by cholecystotomy, if found advisable, and condemns the attempt to provoke or wait for adhesions. Indeed, upon this disregard of adhesions hinges the whole of our modern progress in abdominal surgery. It points out that to Bobbs, of Indiana, and to Sims, both American surgeons, is due the credit of first performing and practically perfecting the operation. He advises the formation of biliary fistula rather than sewing up the gall-bladder, and disapproves, as a rule, of removal of the gall-bladder, as adding a new and usually a needless danger.

THE HYGIENIC MANAGEMENT OF THE SUMMER DIARRHŒA OF INFANTS.—In an article on this subject published in the *Archives of Pediatrics*, Dr. J. Lewis Smith says that a more extended observation of the use of peptonized milk, during the hot term, has shown that it can be conveniently given mixed with farinaceous food, when both ingredients are properly prepared, and in some instances the result seems to be rendered better by the admixture than when the two are used separately. The formula given for peptonizing milk is apparently improved, for infants under the age of three or four months, by adding more water.

The Sisters in the New York Foundling Asylum, who are close observers, and have ample opportunities for observation, now prepare the milk for infants under the age of three months with an equal quantity of water, a change from the published formula, which they have made through their own observations, and not by professional advice. Prof. Leeds, of Stevens' Institute, who is probably more competent to express an opinion in infant dietetics than any other scientist in America, since he has made more analyses of human and animal milk, and of the many infant foods, than any other chemist, recommends the formula:

"1 gill of cow's milk, fresh and unskimmed.
1 gill of water.
2 tablespoonfuls of rich cream.
200 grains of milk sugar.
1¼ grains of extractum pancreatis.
4 grains of sodium bicarbonate.

"Put this in a nursing-bottle, place the bottle in water made so warm that the whole hand cannot be held in it without pain longer than one minute. Keep the milk at this temperature for exactly twenty minutes. The milk should be prepared just before using."

The object is, of course, to provide from cow's milk a food which will be the nearest possible approximation to healthy human milk, and this appears to be achieved by the peptonizing process. Certainly what physicians have long been desiring—namely, some mode of preparing cow's milk so that its casein will coagulate in flakes, like that of human milk—has been obtained by peptonizing.

Healthy human milk must still be preferred when it can be obtained, but he claims for peptonized milk that it is a most useful addition to the dietetic preparations for infants, probably surpassing in value the best of those in the shops.

A delicate infant, having just entered its second year, and bottle-fed, began to have diarrhœa with vomiting in the middle of July. Peptonized milk was recommended, mixed with an equal quantity of barley-gruel, to a small teacupful of which a half teaspoonful of malt had been added. Although the proportion of barley-flour to water was a heaped teaspoonful to six tablespoonfuls, and the gruel was nearly like a paste, yet when the malt was mixed with it, and the starch converted into sugar, it became so thin that on the addition of the milk it could be used in the nursing-bottle. The result was favorable. The farinaceous food thus prepared seemed to possess all the advantages of the more costly preparations made by Liebig's formula.

In order to treat successfully a case of the summer diarrhœa many details in the hygienic management should be personally supervised by the attending physician. Inexperienced and careless mothers or nurses will sometimes thwart the best efforts of the physician, as by giving milk that has begun to sour, or food from the table which is indigestible and proper only for older children. Since errors in diet are an important factor in producing this disease, they also tend to perpetuate and aggravate it. The summer diarrhœa of infants is an intestinal catarrh, its worst form—cholera infantum—being one of the most violent inflammations to which infancy is liable, and the digestive function is so feebly performed and so readily disturbed by improper food, leading to an aggravation of the malady, that strict and positive directions should be given in reference to the feeding. The thirst, especially when the disease is acute, is intense. The patient, if permitted, will often take with avidity more nutriment than it requires, to relieve the thirst, and will fret for more when the bottle or breast is withdrawn. The cause of this fretfulness should be understood and should be explained to the nurse, that the proper remedy may be used, else she will probably overfeed the infant in order to keep it quiet. Ice-water, which is the proper remedy for this fretfulness from thirst, should be given in small quantities and often, and it should contain a small amount of whiskey or brandy. A good rule is to allow from two to three drops of the stimulant for each month in the age, every second or third hour. Water, judiciously given, does not seem to aggravate the disease; it has a very tranquilizing effect, and will aid in procuring sleep.

The temperature should be taken at each visit of the physician. In severe acute attacks it frequently rises to 103°, and in that most rapid and dangerous of all the forms of the summer diarrhœa—cholera infantum—it commonly rises to 105° or 106°. Physicians need not be reminded how quickly the strength of the infant becomes exhausted by a high temperature and diarrhœa.

Dr. Smith recommends the application of a cloth wrung out of ice-water or an India-rubber bag containing ice-water to the head, if the disease be in its early stage and the temperature at or above 103°. Alcohol may be added to the water so as to overcome the popular objection to the use of cold externally. Cold to the head, and cold sponging of other parts, when they are hot, tend, when the patient becomes accustomed to them, to relieve the restlessness and add materially to its comfort. In midsummer, when the atmospheric heat is greatest, the physician is sometimes summoned to cases which begin suddenly with high fever, jactation, great restlessness or drowsiness, and intense heat of the head. The use of cold externally is imperatively demanded in the treatment of such attacks. Some of them are so severe, and begin so suddenly, that they have been supposed to be cases of thermic fever or sunstroke, for diarrhœa sometimes occurs in sunstroke. In this violent form of the summer complaint, attended as it is by dangerous cerebral symptoms, the speedy reduction of the high temperature by ice to the head is a matter of the first importance, together with sponging of the extremities, if their temperature be much above normal.

Spurious hydrocephalus, in most instances, occurs at an advanced stage of the diarrhœa, but sometimes in severe forms of the "summer complaint" it occurs early. When this threatens, cold applications should be made to the top and back of the head by a cloth frequently wrung out of ice-water or by an India-rubber bag.

The infant should be allowed to remain quietly in the recumbent position. Rocking it and frequently taking it up and walking with it, which anxious mothers will often do unless directed to the contrary by the physician, promote the vomiting and diarrhœa. Repose should be enjoined as in the diarrhœal maladies of adults, and when the infant is taken outdoors to obtain fresh air it should be carried quietly and with as little jolting as possible.

Hypostatic congestion of depending portions of the lungs, ending in hypostatic pneumonia, is common in feeble and wasted infants suffering from the diarrhœa. Such cases are met towards the close of the hot weather, and the chief symptom which indicates this complication is a short and painless cough. To prevent the hypostasis, which occurs in those who lie day and night in one position, it is proper to change the the patient from side to side every two or three hours.

A CASE OF POSSIBLE BONY UNION AFTER INTRA-CAPSULAR FRACTURE OF THE FEMORAL NECK.—In a paper read before the Philadelphia County Medical Society, and published in the *Maryland Medical Journal*, Dr. John B. Roberts reports the following case: The patient, a German woman, 78 years old, was admitted to his ward in St. Mary's Hospital, on August 30, 1884, after falling from a street-car. The resident surgeon believed there was no fracture at the hip; but on his visit he considered that the position of the limb and the patient's age pointed to intra-capsular fracture of the neck of the femur. On taking hold of the leg, and making rotation without violence, he felt indistinct crepitation. At once desisting from further manipulation, he ordered permanent extension by weights and lateral support by sand-bags to be the treatment. Within four days, incontinence of urine, the development of a superficial bedsore, and the debilitated condition of the patient showed that there was danger of the aged woman dying. He accordingly ordered the resident surgeon to discontinue the fracture dressing, so that the patient's buttocks and back could be kept clean, and the bedsore properly dressed; telling him that no union of the fracture was likely to occur, and that he must endeavor to save life by tonics, stimulants and food, and the prevention of further bedsores. Ten days later—that is, two weeks from the time of injury—another incipient bedsore was noticed on the buttocks. Six days subsequently she was sitting on a chair. The bladder symptoms gradually improved, she soon sat up all day, and on October 4, five weeks after admission, she was walking on crutches On October 26 she was able to walk a little *without* crutches, though she did not do so much. She continued to gain in activity until her discharge on November 2. The result, says Dr. Roberts, was so unexpected to me, for no restraint of motion at the hip was attempted after four days, that I almost mistrusted my diagnosis, and concluded that possibly the resident surgeon's original diagnosis was correct. I had made no investigation of the condition of the limb since she began sitting up. A few days before her discharge, however, I put her in bed, and with my colleague, Dr. Kean, examined her. The leg was strongly everted, as in intra-capsular fracture, immediately after the injury, and she was able to invert it only so far as to make the toes nearly vertical. She could raise the leg, however, and lay it across the other or carry it outwards; and, indeed, appeared to have motion of the joints except full inversion, though she stated it was a little stiff when walking. She had no pain. The everted leg, therefore, made the correctness of my diagnosis an established fact. Here, then, in a woman of 78 years was obtained union and a useful limb, despite the absence of treatment. In the face of such result, treatment should always be attempted, and not abandoned unless circumstances, such as arose here, demand its discontinuance. Well-directed treatment will certainly be expected to make many good cures, if no treatment will occasionally give so excellent a limb.

## ORIGINAL TRANSLATIONS.

### THERAPEUTICAL RESEARCHES UPON ANTIPYRENE, THE NEW ANTIPYRETIC. By HENRI HUCHARD, Physician to Bichat Hospital. Translated from *L'Union Médicale* by H. McS. GAMBLE, M.D., Moorefield, West Va.

In his recent and remarkable work upon typhoid fever, a venerated teacher, M. Noel Gueneau de Mussy judiciously says that "the hyperthermy is the measure and not the cause of the gravity of the disease," but he takes care to add that it may become in its turn a coefficient of functional derangements, and that it ought to be combated by all the therapeutical means that we possess.

We subscribe without reserve to these wise words, and we think that, if one assigns too important a rôle to the accidents produced by the thermic elevation, and if one is not always sufficiently preoccupied with the care of combating the septicæmic complications, there are often clear indications to be followed in regard to the hyperthermy which may become the cause of more or less grave degenerative lesions in the viscera, the heart, the liver and the kidneys, as well as in the muscular system, and constitute a real danger in cerebral rheumatism, for example, typhoid fever, certain cases of pneumonia of an infectious nature, etc. The ideal would be to obtain medicines which were at the same time antiseptic and antithermic, or should have the effect of lowering the temperature only upon the condition of exercising antiseptic properties. It is doubtless thus, according to M. Bouchard, that in typhoid fever the sulphate of quinine comports itself, which in large doses succeeds in lowering the temperature, whilst it produces no effect, or almost none, in many febrile diseases, such as pneumonia, erysipelas, etc.

But in dothienteritis, the quinine salts very quickly exhaust their action, since after a few days the febrile temperature, for a moment lowered, ascends again to its original degree. Salicylic acid and salicylate of soda often have an uncertain action upon the temperature; they accentuate the tendancy to hæmorrhages, to epistaxis, to intestinal hæmorrhage, provoke dyspnœa, pulmonary congestion, delirium and agitation. It is the same with phenic acid, of which perhaps too much harm has been said, but which produces shivering, abundant sweats, dyspnœa, pulmonary congestion, and the administration of which may be followed sometimes by disquieting phenomena of collapse. As to résorcine, it has no effect upon the fever of the subjects of phthisis; it determines virtigo, ringing in the ears, like quinine and the salicylic compounds, and exercises but a feeble action upon the temperature of typhoid fever. I speak, simply to mention them, of cold baths, which will never enter into general practice because they demand unusual precautions, which cannot be applied to all febrile affections, which are endowed with no antiseptic properties, and which often expose patients to real dangers. Finally, kairine (a derivitive from quinoline), discovered by Otto Fischer (of Munich), and tested for the first time by Filehne (of Erlangen), determines, it is true, a sudden fall of the temperature, but which does not last; so that one is obliged every half hour or every hour to subject the patient to the action of the remedy. It gives rise, at the moment of the secondary rise of the temperature, which takes place too suddenly, to profuse sweats and violent rigors for about half an hour, and which may attain a duration of three hours, of which we see a striking example in the recent thesis of M. Girat; finally, its antipyretic action is produced only upon condition of determining globular modifications in the blood, often of a very serious character.

As to the antithermic action of the alcoloids of quibracho, and especially of the salts of aspidospermine, of quibrachine and of hypoquibrachine, which we have recognized in our experiments performed in connection with Dr. Eloy, it is not yet out of the experimental domain, and in every case these different agents tried by us in typhoid fever have produced but a slight decrease of temperature.

A good antithermic then would be that which would lower the temperature in a progressive manner, which would maintain it for a sufficient length of time at the normal level, which would act in all febrile affections, and which would determine no injurious effect upon the organism. Are all these qualities united in a new remedy, antipyrine, which, isolated for the first time by Dr. Knorr (of Munich), has just been the subject of important labors in Germany? That is what we are soon going to see.

Antipyrine, the formula and mode of preparation of which are unknown to us, must be an oxygenized alcoloid, derived from quinoline, which has been extracted by synthesis from the element of coal tar, and which at first received the barbarous name of dimethyloxychinicine, by reason of its chemical composition. It presents itself under the form of a slightly greyish or yellowish-white powder, crystalline, of a scarcely appreciable odor, and a taste somewhat aromatic and bitter; very soluble in water and alcohol, assuming a deep red tint upon the addition of a few drops of perchloride of iron, which thus distinguishes its presence in the urine of patients subjected to this remedy.

According to Filehne (of Erlangen), who first made known the antithermic properties of antipyrine, a quantity of four to six grammes given in three doses an hour apart surely lowers the temperature in a slow and progressive manner until it reaches the normal figure; this action is maintained for six or eight hours, sometimes even still longer, eighteen to twenty hours, and the secondary rise of the temperature, which is not sudden as after taking kairine, is not attended with chills or profuse sweats, or a tendency to collapse. The patients even experience a sensation of well-being; they have sweats of ten or twenty minutes duration at most, about three-quarters of an hour after the administration of the medicine. The pulse should follow a march parallel with the temperature, and should diminish in frequency, though our observations have given us but little information upon this subject. The action of the medicine upon the arterial tension, and upon the cardiac contractility, is not yet clearly demonstrated. Antipyrine is eliminated through the urine, perhaps through the perspiration, but in the former fluid we can recognize the characteristic reaction of the perchloride of iron an hour after the administration of the remedy, and that even after thirty-six and forty-eight hours.

Its inconveniences are almost none; the sweats, however, may become abundant, but they might be avoided by ordering, ten minutes before the first dose of antipyrine, five milligrammes of agaricine or half a milligramme of atropine; its slightly bitter taste may be masked by the addition of a little mint water. Its administration determines nothing that recalls quinic or salicylic intoxication; little or no ringing in the ears, no deafness; sometimes a slight heat is observed in the head, a sensation of a nasal stuffing, which may proceed even to repeated sneezing, as we have seen in one of our cases; a slight dilatation of the cutaneous vessels, which, in some rare instances, may go so far as the production of an exanthem described by Ernst (of Zurich) and Masius (of Brussels). In a few patients, however, antipyrine produces an intolerance on the part of the stomach, a little pharyngeal constriction, a little repugnance and vomiting, which then oblige us to have recourse to subcutaneous injections, and to the rectal method.

In infantile practice, Penzoldt and Sartorius give three doses at an interval of one hour, containing as many decigrammes as the child is years old.

The applications of antipyrine are numerous. In typhoid fever, in quantities of 4 to 6 grammes a day, Filehne, Guttmann, Falkenheim, etc., in Germany, have administered the remedy for a long time without provoking any accidents; under its influence the dicrotism disappears, as Muller has remarked, and as I have myself observed by sphygmographic tracings; even the duration of the disease has seemed to be diminished, and Drs. May, Rapin and Sécrétan affirm with reason that antipyrine is far superior to sulphate of quinine and cold baths in the intensity and duration of its antipyretic effects. Thus it is that one might, so to speak, cause typhoid fever to evolve without fever, and that without any inconvenience to the patient. Finally, in all febrile diseases, pneumonia, erysipelas, acute articular rheumatism, diphtheria, puerperal fever, etc., the administration of the medicine has always been followed by happy effects and the fall of the temperature. But as antipyrine is an antipyretic, and not an antiperiodic like sulphate of quinine, it results that it has failed against intermittent fevers, even in the quantity of 25 grammes in 24 hours, a quantity which I would never dare, for my part, to try, because it may have a real danger, and substitute the danger of hypothermy for that of hyperthermy, as in a case of Masius (of Brussels), which reached a temperature of 33 C.

But there is, as is well known, a fever extremely rebellious to all medicinal agents, and even against sulphate of quinine: it is the fever of phthisis. But our experiments, which have been especially directed towards this subject, demonstrate in the most conclusive manner that antipyrine exerts a powerful and certain influence over these febrile symptoms.

Here are several cases which I have gathered in my service, with the aid of my excellent interne M. Marciguey:

*Case* 1.—A young girl, 19 years of age, florist, enters Bichat Hospital October 23. She is affected with rapidly-progressing tuberculosis (signs of considerable pulmonary induration at the right apex, secondary pleurisy of the same side; fever almost continually, with evening exacerbation rising to 40).

November 18.—The temperature being 39.8 at 4.30 P.M., she is given 2 grammes of antipyrine. Half an hour afterwards, at 5 o'clock, the temperature has fallen nearly 1 degree, it is 38.9.; the pulse, from 114, has fallen to 90, and at this time only a slight moisture of the skin is noticed. At 5.45, temperature 38.2, and at 7 o'clock, 37.4. In one hour and a quarter the temperature then has fallen without accident 2.4 down to the normal. The patient has passed an excellent night, without sweating; she has no nausea or vomiting or chill. The presence of the medicine was detected in the urine passed during the night by the characteristic reaction of the perchloride of iron.

November 19.—At four o'clock in the evening, temperature 40.2 (3 grammes of antipyrine); at 4.30 and 5 o'clock, 39.4 (some sweating): at 10 o'clock, 37.8.

November 20.—At 4 o'clock, temperature 3.90 (2 grammes of antipyrine), and at 4.30 o'clock, 38.5; at 5 and 6 o'clock, 38; at 7 o'clock, 37.6, and at 10 o'clock, 37.4.

November 21.—No antipyrine was given, and the temperature was seen to ascend, but to a much lower degree than upon the preceding days.

November 25.—The morning temperature is 38; the patient has vomited twice, which certainly was not caused by the medicine, for the same thing happened the day following without any cause; the temperature returned to 39 in the evening (the patient took no more antipyrine), and to-day, November 26, the reaction of perchloride of iron on the urine is observed, thirty-six hours after the last dose of the medicaments.

You have read the remarkable effects produced by antipyrine. I could cite still other examples, all of which would demonstrate, moreover, that under the influence of this precious medicament the temperature of the subjects of phthisis is lowered in a progressive and certain manner without provoking any accident; that the thermic reduction lasts from six to nine, and even to twelve hours; that the action of the medicament makes itself felt for some days following; finally, that it is not necessary to have recourse to doses of four to six grammes in order to reduce the temperature, but only to doses of two to three grammes.

In order to demonstrate still further the effect of antipyrine upon the febrile temperature in general, and upon that of phthisis in particular, I cannot resist the desire to publish the following case observed in the city:

*Case* 2.—This relates to a young man, 17 years old, attacked with a hæmoptysis for the first time on the 16th of August, 1884. Since that time the well-marked tuberculosis at the right apex has made real progress, and the patient has scarcely been a few days without fever, notwithstanding the employment of all the known antiperiodics and antipyretics. It was under these circumstances that I proposed to the father of the young man to make use of the new remedy, and from the first day the temperature became normal. To the great astonishment of all the family, the patient, who was very much weakened, experienced a strong sensation of well-being, and was able to get up and start for the South in a condition of real improvement.

November 16.—At 3 o'clock in the afternoon, temperature 39.2 (2 grammes of antipyrine) ; at 4.15, and at 5 o'clock, 37.8 (1 gramme of antipyrine) ; at 6 o'clock, 37.8, and at 9.30, 38.1.

November 17.—At 8 A.M., 37.5 ; at 10.30, 39 (3 grammes of antipyrine) ; at 11.30, 38.1 (1 gramme of antipyrine) ; at 4 o'clock, 37.4 ; at 7 and 10 o'clock, 38.6.

November 21.—At 8 o'clock, 37.2, the patient has no sweating, he has experienced no accident, and he has, on the contrary, experienced a great feeling of comfort.

Finally, I have received under date of December 1, from a city in the South, where the patient is staying at the present time, a letter from which I extract the following passage : " November 30, the temperature being 39.2 at 3 o'clock, two grammes of antipyrine are taken, and at 4 o'clock, *without any disturbance*, the temperature was 38 ; at 7 o'clock, 37.2 instead of 39.5 or 40.2, which we had some days before." These figures need no comment.

I give here the histories of a few other cases, which demonstrate the antipyretic action of the remedy in different affections (pleurisy, pneumonia, phlegmon of the abdominal walls) :

*Case* 3.—An old man, 70 years of age, suffering with pleurisy (Ward Andral, No. 24), November 19, at 5 o'clock, presents a temperature in the axilla of 39.2. He is given then two grammes of antipyrine ; at 5.30, half an hour after the administration of the medicine, the temperature was 37.8, and at 7 o'clock, 36.2, but we note the production of very abundant perspiration.

*Thus, in two hours, the thermic reduction was three degrees.*

*Case* 4.—Another patient, F., cartman, 23 years old, was admitted, October 20, Ward Andral, No 23, convalescent from tpyhoid fever. Since November 7 this patient, successfully treated during the whole continuance of his enteritis by caffein, has presented a normal temperature below 38. On November 28, under the influence of an abscess of the abdominal wall, the temperature suddenly ascends to 40.1.

November 24.—At 10.45 o'clock, 39 (2 grammes of antipyrine) ; at 11.30 and 11.45, temperature 38.4 ; at 1 o'clock the urine presents the characteristic reaction to perchloride of iron ; at 3 o'clock, 38.1 (2 grammes of antipyrine) ; at 6 o'clock, 36.6 (no veritable sweating, nausea, nor vomiting) ; at 10 o'clock, 38 (tranquil sleep).

November 25.—The morning temperature was normal, and in the evening it did not ascend again above 38.6, and the sphygmographic tracing demonstrated the disappearance of dicrotism.

I have also employed the antipyrine in private practice in a very interesting case. It was in a case of pneumonia of the infectious form contracted by the patient five days before. This pneumonia had supervened insidiously, without pain in the side, although his wife had been taken with the same grave symptoms eight days before. Called in consultation by my excellent confrère, Dr. Lelu, I regarded, as he did, the position as very grave, and even desperate (double pneumonia, abundant prune-juice expectoration, intense dyspnœa, facies leaden, subdelirium, jerking of the tendons, high fever). We were in presence, not of a pneumonia with fever, but of a fever with pneumonia, and it was important to address ourselves in this case to the febrile element, which certainly was playing the principal rôle. The temperature was promptly reduced by the medicine. The general condition improved for a little while, it is true, for the patient succumbed two days later; but the improvement was such that we could not too strongly advise the employment of the antipyretic at the commencement of these grave forms of pneumonic fever.

Here is the abridged account which Dr. Lelu has kindly given me of this interesting case:

*Case* 5.—According to your advice—wrote my excellent confrère—I have administered the antipyrine to the patient attacked with double pneumonia of infectious form, whom we saw together. The antithermic action of this medicine was remarkable, and I know of no substance in therapeutics of which the effect upon the temperature is as rapid and as marked. Unfortunately, the antipyrine was administered, so to speak, *in extremis*, which has not allowed us either to study or to demonstrate the effect of the remedy upon the progress of the disease. Nevertheless, such as it presents itself, the case offers a great interest, in spite of the very unfavorable conditions under which the medicament was employed. By your advice, at eight o'clock in the evening the antipyrine was given in the dose of two grammes, when the axillary temperature marked 39.9. An hour afterwards the thermic figure had fallen two degrees, and was only 38. Up to one o'clock in the morning the temperature, taken regularly every hour, remained stationary at 38, and at this hour only did the thermometer reascend to 39.

The next morning, two grammes of antipyrine were again administered at nine o'clock, and this time the effect was also quite as marked. For an hour after, that is to say, towards ten o'clock, the temperature had fallen from 39 to 37.8. The following hours, eleven, noon, one o'clock and two, we observed 38, 38.2, 38.2, 38.4. It was only towards five o'clock in the evening that the temperature ascended to 39.5, whilst on the preceding days, at the same hour, the thermometer indicated 39.9 and 40.5. Notwithstanding this diminution of the temperature, I did not remark, under the influence of the antipyrine, any modification of the pulmonary symptoms, which were, moreover, so grave that we predicted death in a short time. But one cannot speak positively upon this subject, the antipyrine having been prescribed too short a time, and perhaps in too feeble doses (4 grammes in two doses, at nearly eleven hours' interval), in an extremely grave and desperate case (double infectious pneumonia, in an alcoholic subject).

About an hour after the administration of the remedy, this is what was observed : The patient had profuse sweats, without rigors; the number of respirations fell from forty-eight to forty, and their amplitude seemed to become a little greater. The dryness of the tongue was a little less for an hour or two, and, during this lapse of time, the patient appeared to experience a real comfort and a great relief. However, the pulse did not lose its frequency, and continued all the time at 120, even when the thermometer fell to 37.8. Apart from a few transient attacks of virtigo, and without importance, which lasted about fifteen to twenty minutes, the patient seemed to feel no malaise.

Thus, then, considerable reduction of the temperature, diminution of the number of respirations, feeling of comfort for several hours, diminution of the dryness of the tongue ; such are the effects obtained with four grammes of antipyrine. Circumstances unfortunately prevented me from continuing the administration of the medicine, and even from again seeing the patient, who succumbed, moreover, the next morning. But this issue was foreseen, as you know, the day before, when you saw the patient in consultation with me. . . . .

After the administration of the antipyrine the patients sometimes have pretty profuse sweats ; although they are less profuse and of shorter duration than those determined by phenic acid or kairine, it was interesting to know if the prescription of antisudorific preparations, before the exhibition of the antipyrine, would remedy this slight inconvenience, which, besides, I repeat, takes place in an inconstant manner. The following case, which we have already reported, concerns a man, 70 years old, attacked with pleurisy, and who, after the first doses of antipyrine, complained of pretty abundant sweatings. The latter were not produced, as we are going to see, under the influence of a pill of agaricine prescribed a quarter of an hour before the antipyrine, as Dr. Riegel (of Giesson) recommends ; we will also see that the suppression of the sweats did not interfere with the antifebrile action of the remedy :

*Case* 6.—November 25, at 3 o'clock, the temperature being 38.5, a pill was administered containing 0.005 milligrammes of agaricine, to prevent the production of sweats. At 3.15 o'clock, one gramme of antipyrine was given subcutaneously; at 4.15 oclock the temperature was 38 ; at 5.45 o'clock it was 37.4 ; at 7.45 o'clock it was 36.8. The sweating did not appear.

Finally, I have desired to see the effect of the remedy upon patients without fever, the more because certain authors in Germany had noted the presence of a thermic elevation in these cases. I have not discovered it, as will be seen from the following account, and I have not observed, moreover, any diminution of the thermic figure in a well subject :

*Case* 7.—At 3.30 o'clock, the temperature being 37.2, two grammes of antipyrine are given to a patient; one hour and two hours afterwards the temperature remains at 37, but the next day the characteristic reaction of the urine is observed.

These accounts are sufficient to demonstrate the really remarkable effects produced by antipyrine. They prove that this remedy, at least so far, is exempt from any inconvenience, and that it reduces the temperature in a certain and progressive manner in those cases, as in the fever of phthisis, where all antipyretics most frequently fail. I have used from two to four grammes a day, which I have dissolved in the quantity of two grammes in a half a glass of aromatic water with syrup of mint.

It seems to me useless to employ subcutaneous injections; in the first place, because the ingestion of the medicine by the stomach produces no disturbance, except in those rare cases in which it produces vomiting; in the next place, because the hypodermic method is a little painful, and has seemed to me to yield less satisfactory results, contrary to what is known of the action of subcutaneous injections. But other experiments yet more numerous are necessary in order to settle this question scientifically.

As among certain subjects antipyrine produces a little repugnance, with nausea and vomiting, one might certainly administer the medicine in the form of an injection in the quantity of two or three spoonfuls of a solution to the 15th in 200 grammes of water.

I can only here glance upon its physiological action, which I but imperfectly understand and which will be revealed, I hope, by the experiments and observations of one of my pupils, who is devoting his inaugural thesis to this interesting subject.

Does the medicament exercise any action upon the circulatory system, as quinine does, for example? The thing is not probable, for the sphygmographic tracings have demonstrated to me only the disappearance of dicrotism of the pulse, and the latter is certainly less influenced than the temperature.

Does it act upon the thermogenic centres? It is possible, even probable, although this explanation tells us absolutely nothing, and only serves to extend the limits of the question.

Is antipyrine one of those remedies indirectly antipyretic, which act upon the temperature only by attacking the infectious elements of diseases? I do not believe so, unless we admit the existence of an antimicrobic panacea, which would act as well against the baccillus of tuberculosis as against the microbe of pneumonia or of typhoid fever, And, besides, the manifest action of the medicine against affections simply febrile, such as a pleurisy *a frigore*, a phlegmon of the abdominal walls, etc., it demonstrates clearly that this substance acts above all in its quality as an antithermic.

From this latter point of view, again, it might be asked whether the action of antipyrine ought not to be compared to that which has been attributed to the salicylic compounds and to quinine by Binz. Antipyrine would thus act upon the cellular elements themselves, and it would have a retarding effect upon the process of oxydation, as would tend to prove the diminution of the organic waste and the urea which we have observed consecutively to the administration of the antipyretic substance. This question of the physiological action of the medicine remains still in doubt; but there was one which we had hoped to resolve immediately, in the interest of the patients themselves: there are antipyretics which reduce the temperature only upon condition of provoking globular disorders or modifications, sometimes grave, in consequence of the change of the oxygenized hæmoglobin into methymoglobine. In a word, it was necessary to know if antipyrine is poisonous to the blood. But the spectroscopic examinations that we have been enabled to make, thanks to the kindness of our friend Hénoque, have demonstrated to us that there was no danger in that direction, and that there is, as well in man subjected to the antipyrine treatment as in animals poisoned by the medicament, neither methymoglobine nor notable alteration of the globules so long as the animal has not reached the stage of asphyxia.

## CONCLUSIONS.

1. Antipyrine constitutes a powerful and certain means of reducing the temperature in almost all febrile diseases (typhoid fever, pulmonary phthisis, pneumonia, pleurisy, acute articular and cerebral rheumatism, angiocholitis, diphtheria, puerperal fever, scarlatina, abscess, phlegmons, etc.).

It attenuates the symptoms which are dependent upon the thermic elevation (acceleration of the pulse and of the respiration, dryness of the mouth, etc.); but it does not seem to have any direct effect upon the respiration and the circulation.

2. Antipyrine is an antipyretic, and not an antiperiodic, hence its inefficacy in intermittent fever to prevent the paroxysms.

3. Its administration exposes one only to slight and inconstant disturbances: light sweats, pharyngeal constriction, nausea, or sometimes vomiting, and in a few relatively rare cases the production of rubeoliform or scarlatiniform exanthems; no tendency to collapse, no intoxication, as after the administration of quinine or salicylic preparations.

4. Numerous observations demonstrate that antipyrine constitutes the most powerful, and to the present time the only means of effectively reducing the temperature of tuberculous subjects.

In the quantity of two grammes, administered more particularly in the evening, at the time the fever rises, the temperature falls half a degree in half an hour, sometimes in a quarter of an hour; then it diminishes progressively to the normal in an hour and a half or two hours. It is, however, sometimes necessary to prescribe, one or two hours afterwards, another dose of one or two grammes. But, to the subject of phthisis, antipyrine, by reason of the certainty of its action, and with the object of avoiding the troubles provoked by hyperthermy, ought to be administered in small and increasing doses (2 to 4 grammes).

6. The antithermic effect is maintained upon these patients ordinarily from six to nine hours, and makes itself felt for some days following, during which the temperature does not attain its original figure. The secondary rise of the temperature takes place progressively, following in this respect the march of the defervescence; it is not brusque, as after taking kairine, and is never accompanied, as this latter substance, by a more or less prolonged chill.

7. Antipyrine is eliminated by the urine, in which its presence is recognized in two to four hours after its administration, and during a period which varies from 36 to 48 hours. A few drops of perchloride of iron poured into the

urine of patients subjected to this remedy immediately give rise to a very characteristic red color.

8. We have not yet employed antipyrine in typhoid fever. But, according to foreign authors (Filehne, Guttmann, Gerhardt, May, Alexander, Kussmaul, Cahn, Grust, Masius, Snyers, etc.), it is necessary to give it in quantities of five to six grammes per day (two grammes at the interval of an hour, and one or two grammes at the third hour). Under the influence of these doses the reduction of the temperature is, for the first hour, at least 0.4, and at most 2, and it continues in the same proportion to the seventh or eighth hour. Often, at the fifth or sixth hour, the temperature ascends about 1 during an hour, to resume then its regularly descending march (P. Snyers, of Liège).

This slight elevation of the temperature during the apyrexia has been remarked likewise by ourselves during the action of antipyrine upon the fever of phthisis.

9. In typhoid fever the quantities of six or eight grammes indicated by authors seem to us excessive, since they lead to hypothermy, as results from the reports of P. Snyers, who, seven or eight hours after the administration of the remedy, saw the temperature nine times fall below 36, ten times below 35, four times below 34, and once to 33.

Note.—It has been wrongly asserted that antipyrine is a secret remedy. But it results from a letter which we have just received from M. Filehne (of Erlangen), that the chemical constitution and the mode of its production have been published (*Berichte der Deutsch. Chem. Gesellschaft*, Jahr. xvii., Heft 13, 1884). Antipyrine is, according to this, a *dimethyl-oxy-chinizine.* We expected this affirmation on the part of the learned physician of Erlangen, to whom science is indebted for so many important works, and whom we hold, for our part, in such high esteem.

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Large and Small Asylums.—After all there is to say on the subject of large and small asylums for the insane has been said, the question of expediency will resolve itself into one of specific purpose. If the object be simply to house the crippled in mind comfortably and maintain a healthy discipline at the least cost, large, or comparatively large, institutions will be preferred. If, on the other hand, the business of the medical psychologist is to *cure*, then obviously small asylums will be seen to be not only the best, but the only ones admissible. Patients afflicted with mental disease cannot be properly treated in classes or in large wards. If anything is to be done for their relief, it must be done in detail and individually. Asylums for the insane should never exceed the dimensions of an ordinary hospital, and they should be conducted as hospitals. The provision of houses for the safe custody of the incurable is another matter; but no case of mental disease ought to be considered incurable until every possible mode of active treatment has been tried, and the chances of recovery are absolutely exhausted. This doctrine will, of course, be regarded as heterodox by those who set out with the conviction that disease of the brain causing mental derangement is always incurable, which is the notion with which a large number of alienists are honestly impressed.—*Lancet.*

# ORIGINAL ABSTRACTS.

Curability of Epilepsy.—The following very just remarks of Esquirol (cited by L. C. Gray, *New York Medical Journal*, July 5, 1884): throw light on the wonderful results of some physicians in this disease: "I have treated three hundred and eighty-five women or girls, of all ages, past purberty, belonging to the poorer classes. Of this number, forty-six were hysterical and three hundred and thirty-nine epileptic; the majority were more or less chronically insane. . . . . I desired to test the efficacy of the most varied remedies. I tried successively blood-letting, purgatives, baths at every temperature, issues, the cautery, moxas, antispasmodics—both vegetable and mineral. I stopped with hydrocyanic acid. I procured or bought the secret remedies. Every spring and every autumn I chose thirty epileptic women with whose disease I was best acquainted, as regarded the past, the causes, and the symptoms. These women were prepared in advance by exciting their imagination by the repeated promise of a certain cure. I was efficiently seconded by the nurse and the internes. In all cases a new medication suspended the attacks during fourteen days in some, during one month or two in others, and even three months. After this period the attacks reappeared successively in all the women, with the characteristics which they had presented for years before. Several of our epileptics were subjected to my experiments for years; but I must confess that I was unable to obtain a cure. In my private practice I have been scarcely more fortunate; if the attacks were suspended, it was less from the action of the medicaments than from the effect of the confidence which led the patient to consult a new physician. . . . . Authors have mistaken for cure the spontaneous suspension of the attacks, or their suspension by the action of every new remedy; the error is the more possible because the patients are lost to the sight of the physician, who is not consulted upon the return of the paroxysm."

Strapping the Testicle.—Dr. W. B. Hopkins (*Philadelphia Medical Times*, February 7, 1885) says that the advantages of a new method devised by him over the other forms of elastic pressure which have been employed, as the rubber bandage and the compressing-bag, are the perfect uniformity of pressure which can be exerted upon the entire organ, and the readiness with which it may be adapted to any case. Two adhesive strips three-quarters of an inch in width are first made to encircle the scrotum at the upper portion of the testicle, in order to hold the latter well down in the bottom of the scrotal sac, as in the ordinary method, and to form an unyielding base of support for the elastic pressure to act upon. He originally used rubber for this, but found that the succeeding strips of rubber forced the organ partially through the encircling band thus formed, caused the material to become plicated, and thereby gave rise to pain. The testicle being thus fixed, four bands of rubber are applied. These are made of "bandage gum" cut into strips of the required length, an inch and a quarter wide, and retained with "rubber cement." A few drops of the cement are rapidly and thinly spread upon a strip with a spatula, and a few drops more upon the adhesive plaster and skin of the scrotum. These surfaces are allowed to nearly dry, care being taken that the rubber meanwhile does not curl up on itself and stick fast. One extremity of the strip is then placed upon the adhesive plaster posteriorly, carried forward beneath the testicle, and fixed in front. Another is applied in like manner laterally, and two more obliquely, four being usually sufficient to cover in the organ.

Phosphatic Calculus, with the Mouthpiece of a Tobacco-pipe as its

NUCLEUS.—Mr. Reginald Harrison, F.R.C.S., of Liverpool, describes in the *Lancet*, of February 14th, a case of lithotomy where the nucleus of a large phosphatic calculus was the whalebone mouthpiece of a tobacco-pipe. The patient was a man 33 years of age. On admission into the Liverpool Infirmary he found him suffering from calculus in the bladder. Upon examining the calculus with the lithotrite it proved to be large, soft, and peculiarly shaped. The last-mentioned circumstance made him resolve to cut instead of to crush. On June 27th he performed lateral lithotomy, and removed a large phosphatic calculus, which broke under the grasp of the forceps, and disclosed the whalebone mouthpiece of a tobacco-pipe, to which a small piece of rotten string was attached. It was noticed that the smell of tobocco in the mouthpiece was quite distinct. As the phosphatic envelope crumbled under the pressure of extraction, it was impossible to estimate correctly its weight. It must have been very large. About an ounce of these fragments was collected. The patient made a good recovery, and left the infirmary on July 28th. On the fourth day after the operation Mr. Harrison showed him the foreign body, and asked whether he could offer any explanation as to how it got into his bladder. He remarked that "he was glad to see it again. He had swallowed it whilst playing with some companions on board ship three years ago. He felt no pain at the time, nor until last December, when the symptoms of stone became manifest." He was frequently spoken to in reference to the improbability of such an explanation, but he would never admit of any other construction being placed upon the word "swallowed" than that usually adopted. In this statement of the patient, says Mr. Harrison, will be found a point of much interest. Though so highly improbable, was it possible? The only case I know of which would at all substantiate the idea that a foreign body of this nature could find its way into the bladder from the intestines is one recorded by Sir Alfred Roberts, of the Sydney Hospital, who removed by lithotomy a piece of slate pencil two and a quarter inches long, which it was alleged had been swallowed. Commenting on this case, the author says: "I have left no stone unturned to elucidate the truth in this very interesting case, and can only state that after much hesitation I have arrived at the conclusion that the pencil was swallowed by mouth and made its way by inflammation and ulceration into the bladder."

TREATMENT OF CHRONIC DYSENTERY BY VOLUMINOUS INJECTIONS OF NITRATE OF SILVER.—The *Medical Press and Circular* states that at a recent meeting of the Clinical Society of London, Dr. Stephen McKenzie expressed his opinion and confidence in the value of large enemata of nitrate of silver in the treatment of cases of chronic dysentery or dysenteric diarrhœa. The mode of procedure he adopted was as follows: The quantity of nitrate of silver to be used was dissolved in three pints of tepid water in a Leiter's irrigating funnel, which was connected by India-rubber tubing with an œsophageal tube with lateral openings. The patient was brought to the edge of the bed and made to lie on his left side, with his hips well raised by a hard pillow. The terminal tube, well oiled, was passed about eight or ten inches into the rectum, and the fluid allowed to force its way into the bowel by gravitation. The injection rarely caused much pain, and often none. It usually promptly returned, but when long retained it was advisable to inject chloride of sodium to prevent absorption of the silver salt. Various strengths had been used, from 30 to 90 grains to three pints of water, but usually one drachm of nitrate of silver was employed. The treatment was based on the view that whatever the nature of dysentery, whether constitutional or local in the first instance, the latter effects were due to inflammation or ulceration of the colon which was most effectually treated, as similar affections elsewhere, by topical measures. Sometimes one, sometimes two injections were required, and in some cases numerous injections were necessary; but in all the cases thus treated, many of which had been unsuccessfully treated in other ways previously, the disease had been cured. In most cases other treatment was suspended, but in some Dover's powder, or perchloride of iron, which had been previously administered, was continued or subsequently prescribed. The cases narrated were: 1. In which the disease had lasted several years on and off; two injections were used, and the case was cured in six weeks. 2. Second attack, duration uncertain; four injections used; cured in five weeks. 3. Duration, two months; two injections used; cured in three and a half weeks. 4. Duration, five years; one injection used; cured in three weeks. 5. Duration, eighteen months; two injections used; cured of dysenteric symptoms, but remaining under treatment for diabetes. 6. Duration, fourteen months; one injection used; cured in seven weeks. The treatment, which laid no claim to novelty, was brought forward to elicit the experience of others who had tried it, or to induce others to employ it in suitable cases.

The Routine Use of the Vaginal Douche after Normal Childbirth.—The *Boston Medical and Surgical Journal* devotes some remarks to this subject as presented at a recent meeting of the Obstetric Section of the Suffolk District Society, at which Dr. Z. B. Adams, of Framingham, read a paper in which he opposed this practice. The reader's objections to the douche in normal childbed were, it says, that it is artificial, meddlesome, of doubtful utility, that it may be hurtful and even fatal; and the discussion which followed the able introduction of the subject well illustrated the wide diversity of opinion regarding the value of the douche as a prophylactic measure, and the dangers and disadvantages of its use. That the douche has been hurtful, and even fatal, no one will deny, but the same may be said of other simple procedures in incompetent hands; and the careful practitioner, whatever his opinion of the utility of the douche, should not subject his patient to possible harm from the careless use of this, any more than of other, therapeutic or prophylactic measures. We believe, however, that the fountain syringe or irrigator, fitted with a vaginal tube having large lateral apertures, may be used with entire safety, provided the tube is not introduced too far and the reservoir of water is not raised too high. It is a wise precaution, too, to introduce the tube with the water running; the entrance of air is thus effectually prevented. The risk of forcing effete material into the uterus we believe to be entirely imaginary, unless improper force is given to the afferent current. The idea that the douche is artificial and meddlesome is based on the theory that parturition is a physiological process, and that in normal cases the medical attendant should be merely an intelligent spectator. The theory was vigorously opposed by some in the debate, and we think justly so. It seems unnecessary to point out that modern civilization has transferred the parturient woman of the nineteenth century from the physiological status of primitive times to one, which, if not pathological, is certainly beset with many dangerous possibilities. The cry of "meddlesome midwifery" is constantly raised against those who seek to prevent the dangers and palliate the sufferings of normal labor; however justly in other respects, in regard to the douche we can only say that, so far from being painful and annoying, we have always found it considered as comforting and refreshing. But the vital point at issue seems to be the question of utility. It was pointed out in the discussion that Macan, of the Dublin Rotunda, obtained his extremely favorable results without the aid of the vaginal douche in normal cases; but it should be remembered that Macan employs such extreme antiseptic precautions that he considers the douche simply superfluous. The same may be said of Garrigues, who, in his service at the Maternity Hospital on Blackwell's Island, after the most scrupulous precautions before and during labor, applies to the vulva post partum an antiseptic pad "with the same special care that would be used in dressing a wound after a capital operation;" and this dressing is changed every six hours. Under such circumstances Garrigues regards the douche as unnecessary. In private cases these extreme precautions are seldom feasible, and in the purer air of country practice are perhaps unnecessary; but in cities and large towns, where impure air and unsanitary plumbing are a constant source of danger, the douche may be of incalculable value in lieu of the stricter precautions found necessary in hospitals. We should say, therefore, in conclusion, that the vaginal douche in normal childbed, when given by competent hands, and with proper apparatus, is not dangerous nor even hurtful; that it affords a refreshing sense of cleanliness and well-being to the patient; that it promotes the healing of abrasions and lacerations; and that it may be the means of preventing infection.

INTUBATION OF THE LARYNX.—In the *N. Y Medical Record*, of February 21, Dr. E. F. Brush thus describes a case of intubation of the larynx by Dr. O'Dwyer, which he witnessed at the New York Foundling Asylum, in a child three and a half years old suffering from pneumonia and inflammatory croup: "The boy was placed in the nurse's lap, an assistant held the head; a gag was put into his mouth. Dr. O'Dwyer passed the index finger of his left hand back into the child's pharynx, while his right held an instrument shaped like a small steel sound of the Van Buren pattern, on its distal end a gold-plated oval tube four-sixteenths of an inch in its long diameter, and two-sixteenths in its shorter diameter, and one and a half inches in length, collared around the upper extremity except at the anterior curve of the oval. In this uncollared portion was a small eyelet armed with a long silk thread. This tube was carried along the doctor's finger into the pharynx. There was a spasmodic coughing, a reddening of the face, the sound-like instrument was immediately withdrawn without the tube, the boy gave a long, deep inspiration, the thread was quickly withdrawn, and a marvelous change was instantly produced in the patient's whole condition. The intense redness caused by the first irritation gradually faded, a copious perspiration broke out over the forehead, the respirations became easy and quiet. I actually thought the child was dead; as the eyes were fixed in a stare of astonishment, and before the little sufferer had recovered from his amazement he was sleeping soundly." Having mentioned other similar cases which he saw at the Foundling Asylum, Dr. Brush gives a sketch of the history of intubation of the larynx and concludes that Dr. O'Dwyer's procedure is not a revival of the old methods. From his own observation of the cases seen by him he states that he is fully convinced that intubation of the larynx is a more simple operation than that of tracheotomy; that the laryngeal tube is worn with greater ease to the patient; that the air which reaches the lungs is heated and moist, which is not the case with the tracheal tube; that coughing and expectoration are carried on with greater ease and more effectually than is possible with the tracheal tube, and that the absolute care and vigilant watching, which form such an absolute element of success in tracheotomy, are not called for in Dr. O'Dwyer's method of procedure. He adds that the most striking feature in this method, and one which must be of the greatest comfort to the physician and to the parents, is the entire absence of mutilation or disfigurement. In the laryngeal diseases of infancy, which so often prove fatal under the very best conditions, parents and friends not infrequently imagine that it was the operation of tracheotomy that was the cause of death. The unsightliness of a dry, cracked mouth; the repulsive spectacle of a tube protruding from the trachea, often lined with, and having hanging from its orifice, expectorant matter; the necessity of informing the parents of the hopelessness of their child's recovery, and of requesting their consent to a desperate surgical operation as a kind of forlorn hope—all these painful elements are spared in the method adopted by Dr. O'Dwyer.

THE TREATMENT OF DISEASES OF THE STOMACH BY THE LEUBE SYSTEM AT KISSINGEN. Dr. E. C. Wendt gives in the *Record* the following description of the treatment pursued by Dr. V. Sohlern in his " Gastric Sanitarium " at Kissingen : The first diet list contains chiefly fluid materials, and is suited for the weakest stomachs. On account of the repugnance which many patients feel for liquid foods, a little variety is introduced by allowing cakes and *zwieback* prepared without sugar. For drink during this period simple water or water from the Maxbrunnen or other similar springs not too heavily charged with carbonic acid gas may be taken. After usually about ten days of this diet the patients are in condition to enter upon the enjoyment of the second bill of fare. Several kinds of solid food are included in this list, all of which are, however, boiled and not roasted or fried. In addition to simple soups, soft boiled or raw eggs, boiled brain, and boiled poultry without the skin are allowed. When the patient is able to use this diet without discomfort, he is advanced to the next grade. He is now permitted to eat raw ham and beefsteak, prepared according to Leube's method, also mashed potatoes, and small quantities of tea or coffee may be taken. At this time much benefit is derived from the use of the waters from some of the strong springs. These hasten the digestive process and improve the appetite. Finally, in the last class, in which the diet approaches nearly to that of individuals in ordinary health, in addition to roast beef and some sorts of game, certain kinds of fish, white bread, vegetables and stewed fruits are allowed. For drink, the patient may take a strong dry wine. The last bill of fare must be strictly adhered to for a considerable time, and any excess will be found to bring down a speedy punishment upon the offender. Not every dyspeptic is forced to advance through these four successive grades, the patient beginning in that class which is suited to his condition. The digestive capacity of the individual sufferer is determined by examination with the stomach-tube, and as soon as this is accurately ascertained he is put upon the appropriate diet, and is then advanced by degrees, in proportion as his stomach becomes stronger, until he is finally able to take ordinary food in normal quantities. Frequent use is made of the stomach-tube, both as a diagnostic and as a therapeutic measure. Medicines are given but sparingly, and the waters are taken at proper times and in suitable quantity according to actual indications. Leube's plan of treatment, as followed in Kissingen by Dr. V. Sohlern, he has found of great value in simple or nervous dyspepsia, acute and chronic gastric catarrh, and even ulcer of the stomach. It is also very serviceable in doubtful cases as a means of diagnosis between ulcer and carcinoma. For in the former case improvement quickly follows upon the establishment of a suitable regimen, while in cancer the progress of the disease is steadily from bad to worse, despite the most careful and systematic dietary treatment.

ADAPTING A TRUSS.—A clinical lecture published in the *Journal of the Am. Med. Association* sums up the points to be attended to in fitting out a patient who has a common inguinal hernia as follows : It is best either to take him to an establishment where a large number of trusses can be tried, or else to carry a large assortment to his residence. The principles involved in the fitting are these : 1. The hernia must first be reduced. No patient can bear an ordinary truss pressing upon the intestine. 2. If the hernia is oblique, apply the truss squarely upon the internal ring, or a trifle downward and inward from that position. 3. If the hernia be a "straight" one, or if it be a direct one, apply the pad upon the external ring, but do not put it upon the os pubis. No patient will tolerate the instrument if it pinches the skin against the bone. 4. When applied, have the patient test it by coughing, straining, running and jumping. If it holds the gut under these tests, and does not slip from its position nor hurt him, it will be for him a good truss, whether it fits anybody else or not.

The main point is to be comfortable to the patient, and to hold the gut. These ends being secured, the numerous minor modern improvements are of secondary consequence. 5. In fitting peculiar cases, the minor points come to the surface, and are briefly these: A person who sweats copiously destroys woven and leather covers, and rusts steel springs rapidly. Celluloid covers last such cases longer. The pad should be proportioned to the size of the ring, not plunging into it like a plug, nor spreading all around it like a flat wheel. Perineal bands are useful in some cases, especially in femoral hernias.

Administration of Ether.—In a paper published in the *Boston Medical and Surgical Journal* Dr. Burrell gives the following rules for the administration of ether: 1. Before etherization the surgeon should satisfy himself regarding the presence or absence of heart disease. 2. The safety of the patient and the comfort of the etherizer largely depend on the use of pure anhydrous sulphuric ether. 3. The best medium for the administration is one in which the ether can be given in a condensed form or largely mixed with air. 4. As a rule, the patient should have a brief, clear description of the sensations he is about to experience. 5. A room free from bustle and confusion before and after an operative procedure is an essential for quiet etherization. 6. Ether should be administered on an empty stomach. 7. The knowledge of the effect of a glass of wine upon a patient is frequently an indication of the exciting or stupefying that ether may have. 8. No mechanical impediment should exist to respiration. 9. The pulse and respiration are the safeguards of etherization. 10. The less ether used in an operative procedure, the better the recovery of the patient from the immediate effects of the operation. 11. A little ether in children goes a long way.

Treatment of Bronchitis.—In the *Therapeutic Gazette* Dr. H. C. Wood says: It is not generally known that alkalies in large doses are among the most efficient of sedative expectorants. The citrate of potassium is by far the most eligible for administering alkaline expectorants; of it half to one ounce should be given in twenty-four hours. The following prescription has been tested during four to five years, and found to be the most reliable and efficient sedative cough mixture that I have ever used: ℞. Citrate of potash, one ounce; lemon-juice, two ouces; syrup of ipecac, half ounce; syrup enough for six ounces. Dose—Tablespoonful four to six times a day. When there is a good deal of cough or any excessive susceptibility of the bowels to loosening medicine, paregoric should be added in small quantity. The ipecac should be varied according to the susceptibility of the patient's stomach. Sometimes it can be advantageously substituted by tarter emetic. Usually two to three drops of such medication will establish free expectoration. Then the stimulant expectorants are required, or squills and seneca. the former being the more valuable, though I cannot affirm that I have often obtained positive results from their use, and think much of their reputation is based upon tradition and natural tendency of the disease to subside. Even squills is inferior to the mur. of ammonia. Like all ammoniacal preparations, this must be given at short intervals to maintain constancy of effect. The action of the single dose can scarcely last over two hours. Its acidity and disagreeableness may be somewhat covered by glycerine. In very large amounts all ammonia salts are capable of acting on the crasis of the blood as alkalies and causing great vital depression. The value of copaiba in chronic bronchitis has been long recognized, and it may sometimes be used with advantage in obstinate subacute bronchitis. When the "cold" in children is obstinate, "syrup of garlic" is very efficacious. But the stimulant expectorant which in my hands has almost replaced others of the class is the oil of eucalyptus. It may be administered in ordinary cases of adults to the amount of about forty minims a day. Its taste is so pre-eminently disagreeable that it should be given in capsules, each of which may contain ten minims; or, if the patient prefer, two capsules of five minims each may be taken as a dose. The oil appears to be slowly absorbed and eliminated so that four times a day is often enough. In emulsion it is very apt to cause unpleasant eructations, but in capsules it is usually well borne. Some stomachs will not tolerate it. Counter-irritation is very useful; the oil of amber, an old remedy, is especially valuable in young children, who have so often marked nervous disturbance and a tendency to collapse, diluted with one to three parts of sweet oil, applied to chest upon saturated flannel; it sometimes acts very happily in allaying nervousness as well as internal congestion.

Night Terrors in Children.—The picture which a child suffering with this condition presents, says the *Archives of Pediatrics*, is somewhat as follows: The child, say from three to six years of age, has gone to sleep, apparently in his usual health. Two or three hours later he suddenly rises up in the bed, with eyes wide open, and evidently fixed upon some terrifying object; this may be to his imagination a monster, robbers, etc. His cries are pitiful, his words incoherent, and he fails to recognize the friends who are around him. This condition may last for five minutes to half an hour, then comes a period of calm, he falls asleep again, and the next day he is as well as ever, without even a recollection of the experience of the previous night. The phenomena of somnambulism are sometimes observed in connection with the condition. It usually occurs in nervous, impressionable children, and very often in those whose constitution is weak, or who have been brought up in defiance of the rules of hygiene. The prognosis is usually favorable, excepting in cases in which severe cerebral lesions are present. The treatment should vary in accordance with the determining cause. Certain hygienic precautions of both physical and intellectual character should be observed in all cases. All cerebral excitement must be avoided, whether it is caused by the reading of fascinating books, or by listening to stories of a terrifying character. The subject should not be left alone in his bed-room, and when an attack comes on he should be soothed and sympathized with. Regular and healthful exercise should be insisted upon, and the diet should be light and unirritating. If dyspepsia coexists, alkaline preparations, pepsin, or the tincture of nux vomica may be given. West is in favor of suitable doses of bromide of potassium and chloral for a calmative effect upon the nervous system. Quinine is also recommended as a useful drug in many cases. If the gums are hot and swollen it will be eminently proper to relieve them by incision.

# SELECTIONS.

## The Protective Treatment of Open Wounds.* By Theodore R. Varick, M.D., Medical Director of, and Surgeon to, St. Francis' Hospital, and Surgeon to Jersey City Charity Hospital, Jersey City, N. J.

In compliance with an invitation from your Executive Committee, received through your honored president, that I "favor the association with a paper on some surgical subject," I appear before you this evening.

It is not with the expectation that I shall be able to instruct so learned an assemblage, but with the hope that possibly what I have to offer may prove sufficiently interesting to merit your attention.

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* Read, by invitation, before the New York County Medical Association, February 16, 1885.

If the ideas thrown out should appear sacrilegious in questioning the divinity of certain Lares and Penates which have received the blind and unqualified adulation of many within the domain of surgery, I would simply say that they are not the inspirations of a moment, but the culmination of convictions forced upon me by long and extensive observation.

The subject I have chosen for discussion is the "Protective Treatment of Open Wounds."

The risk to human life from severe operations and injuries are: 1, from shock and hæmorrhage; and, 2, from sepsis or grave constitutional effects dependent upon the introduction into the body of poisons which, by their overpowering action, may prove destructive to the individual.

From time immemorial it has been the aim of surgeons to minimize the dangers of the first, and obviate the possibilities of the second.

At the present day the doctrine held by a large majority of observers favors the idea of the potency and influence of atmospheric germs in the production of sepsis.

Resulting from this belief, the aim has been, and is, to protect the open surface of wounds from the contact of floating particles, which, finding ingress through the open stomata of capillaries, lymphatics, etc., fructify and increase until the system succumbs to their influence.

From a surgical standpoint, in a person otherwise healthy, for the admission of atmospheric germs it is necessary that there should be a solution of continuity, in order that the means of ingress mentioned above may be exposed. It may be assumed that any method of treatment which hermetically seals and covers up these stomata, and which is free from the objection of any poisonous influence on the part of the agent employed, is the best.

As before suggested, the open stomata of the vessels would seem to offer special opportunities for the introduction of atmospheric germs, and the imbibition of any extraneous poison, gaseous or fluid.

Such would be the case were it not that the flow outward—which occurs at the time of the infliction of the wound, and continues for a greater or less period thereafter—of the fluids washes away any foreign substance which may lodge on the abraded surface.

From the arteries and arterioles there is an accelerated current, from the veins and venules a reversed current, and from the lymph-spaces also an outward flow—all exerting a conservative influence and a temporary protective power.

So long as these exudations occur the patient is safe from contamination from without.

The appearance of an open wound is thus described by Paget in Holmes' "Surgery," vol. i., p. 629: "And if the wound be left open after pure blood has ceased to flow, there is an oozing of blood-tinged, serous-looking fluid, some of which collects like a whitish film or glazing on the surface of the wound."

This is really blood serum, gradually becoming transparent as the arterioles contract to a degree preventing the passage of blood corpuscles, but allowing the exudation of serum.

Flint, in his work on the blood, p. 143, says: "The serum contains all the elements of the blood except the red corpuscles and fibrin, which together form the clot." Again, at p. 146: "It contains all the principles found in the plasma or liquor sanguinis, with the exception of the fibrin."

This exudation is largely albuminous in its character, and it is this element which we have to consider.

According to the same author, "albumen retains its fluidity out of the body until heat or some coagulating agent is applied," (*Ibid.*, p. 157.)

In addition to heat, it is coagulated by the mineral acids and metallic salts.

The coagulating property possessed by albumen under the circumstances indicated forms the basis of treatment proposed.

In a coagulated state it covers the face of the stump or surface of the wound, forming a perfectly-fitting, impenetrable shield, plugging up every capillary stoma; when heat is the agent employed, constringes every arteriole and venule; and, if applied before the outward flow from the divided vessels has ceased, makes the patient absolutely safe from any septic infection from without whatever.

This may seem a sweeping assertion, but it is one based on a large and varied experience in hospital as well as in private practice.

Although it is hard to prove a negative, yet, after an observation of its effects for a period of nearly six years, I have to meet with the first case of septicæmia in my practice.

It seems to me that the vaunted claims of corrosive sublimate and carbolic acid as antiseptics are due to the power possessed by both of these agents of coagulating albumen.

I shall not occupy your time with an enumeration or discussion of the various so-called antiseptics in use, but simply allude to the positive objections to the employment of those mentioned.

Although a great measure of success has attended the use of the former, the possibility of constitutional effects, indicated by the supervention of irritation of the gastro-intestinal mucous membrane, should not be lost sight of.

Several cases have come under my observation in which severe tenesmus followed its use as a dressing.

Again, Sir Joseph Lister, in an address on corrosive sublimate as a surgical dressing, delivered at the opening meeting of the Medical Society of London, October 20, 1884, after citing a case of amputation of the mamma, in which he used a 1 to 500 solution of corrosive sublimate, remarks: "On the following day, when we changed the dressing, I found that under the oiled silk, exactly corresponding to its extent, the skin was highly irritated, and covered with small vesicles. I also found that the inner side of the arm, where there was no wound, was in the same state of intense irritation." He further remarks: "While this case showed that in the sublimate we had an agent that might give very beautiful results, it also indicated that we were dealing with an edged tool, which while it might do admirable work, was also apt to cut our fingers."

According to Bartholow ("Materia Medica and Therapeutics," p. 511), "applied to the integument, carbolic acid is absorbed and systemic effects follow; the urine becomes smoky."

A case in point is reported by Dr. H. B. Sands, occurring during his term of service at the New York Hospital: "This patient had been subjected to the operation of amputation of the thigh for ununited fracture of the femur. For five days after the operation the urine was green in color, an effect due to the absorption by the wound of carbolic acid, used in accordance with the antiseptic method of operating." (*Med. Rec.*, vol. xx., p. 151.)

In the discussion on a case reported by Mr. A. Pearce Gould at a meeting of the Clinical Society of London, held March 28, 1879, of amputation of the hip-joint, in which death was the result, the thrombosis, which was the cause of death, was attributed to carbolic-acid poisoning. (London *Lancet*, Am. ed., 1879, p. 563.)

From the "Index-Catalogue of the Library of the Surgeon-General's Office, U. S. Army," and also from the "Index Medicus," I glean the records of the following cases:

"Injurious Effects of Carbolic Acid from Injudicious Local Applications," by J. S Hughson. *Med. and Surg. Reporter*, Philadelphia, 1879, vol. xxvii., 492.

"Gangrene following the External Use of Carbolic Acid," by J. D. Kelloch. *Canada Lancet*, Toronto, 1877, vol. ix., 195–197.

"Gangrene Produced by the Dressing of Wounds with Carbolic Acid," by Tillaux. *Bull. Gén. de Thérap.*, Paris, 1871, vol. lxxxi., 275.

"Acute Carbolismus by Peritoneal Absorption," by Rheinstadler. *Leutsche Med. Wochen.*, Berlin, 1878. vol. iv., 191.

"Fatal Poisoning by Carbolic Acid used as a Remedy for the Itch, by R. Koehler. *Med. Cor.-Bl. d. Wurtem. artztl. Ver.*, Stuttgart, 1872, vol. xlii., 41–49.

"Fatal Cases of Poisoning by the Absorption of Carbolic Acid, by E. S. Machin. *Brit. Med. Jour.*, London, 1870, vol. i., 331.

"Two Cases of Poisoning by the External Application of Carbolic Acid, by P. Moloney. *Austral. M. J.*, Melbourne, 1872, vol. xvii., 73–77.

"Death from the External Application of Carbolic Acid," by E. Sandwell. *Brit. Med. Jour.*, London, 1870, vol. ii., 382.

"Death from the External Application of Carbolic Acid," by R. Willis. *Ibid.*, 1868, vol. i., 314.

"Poisoning by Carbolic Acid Injected into an Abscess," by Alfred C. Post. *Med. Rec.*, 1879, vol. xv., 378.

"Death from Carbolic-acid Poisoning following Hyperdistension of an Abscess with a Carbolic Solution," by E. H. Bradford. *Boston Med. and Surg. Jour.*, 1881, vol. civ., 324.

"A Case of Antiseptic Osteotomy of the Tibia in which Rapidly-fatal Carbolic Intoxication Occurred," by A. Pearce Gould. "Tr. Clin. Soc., London," 1881, vol. xiv., 201–210.

"Poisoning by Carbolic Acid in an Enema," by O. Meclin. *Hygeia*, Stockholm, 1883, 125–130.

"Paralysis of the Bladder following the Use of Phenic Acid as a Dressing for Wounds," by a Cartoiz. *Gaz. Méd. de Paris*, 1884, t. s. i., 496.

The experiments of Dr. H. G. Beyer, U. S. N., on the hearts of the terrapin and frog show that "carbolic acid, in small as well as large doses, acts as a depressant on the heart from first to last, reducing its rate, its work done, and the blood-pressure." ("Proceedings of the Naval Medical Society," also the *Journal of the American Medical Association*, vol. iii., p. 438.)

These possible effects, stated by such able and distinguished authors and clinicians, are not to be lightly estimated, especially as many patients, after undergoing a capital operation, have but a small margin of vitality remaining.

It is bad surgery to subject a person to present risk for the purpose of avoiding a possible remote contingency.

I think, from the authorities and cases cited, that there is sufficient evidence shown that both of the agents considered are liable to exert their toxic effects on the system, and are therefore unsafe.

The question naturally arises as to what means we have at command which, while forming an absolute protection against the ingress of septic influences into an open wound, is free from the objections mentioned.

My practice is, and has been for nearly six years, immediately the larger vessels have been tied, to apply water (slightly below the boiling point) freely and continuously to the abraded surface until all oozing is stopped, the parts are thoroughly glazed, and the red line of the tissues is slightly deadened.

The effect is not only to form the protective shield before mentioned from autogenous material, which is always available, but it mitigates shock, it promotes reaction, and accelerates healing in a marked degree.

In a paper "On the Causes of Death after Operations and Grave Injuries," which I had the honor to read at the first annual meeting of the New Jersey Academy of Medicine, June 16, 1875, I used the following language:

"The condition of shock may continue for a greater of less period, during which the patient may sink, or, rallying therefrom, pass into a gradual and progressive recovery. Or, again, after having apparently recovered from the first impression, the pulse becoming more rapid and feeble, with slight increase of temperature, and in some cases no perceptible alteration in this respect, with occasional moderate delirium, and a sense of præcordial oppression, may die, apparently without any assignable cause.

"This condition has been variously characterized as secondary or consecutive shock, and is one which should excite our gravest solicitude."

It is under these circumstances that the stimulating effect of heat transmitted to the heart is most marked, and the action of any depressing agent exhibits its baneful influence on an already weakened circulation.

Before I adopted the method of treatment under consideration many patients died, after apparent reaction from primary shock, in the manner described above. Since its adoption, no death from either primary or secondary shock has occurred in my practice.

My connection with St. Francis' and the Jersey City Charity Hospitals, in which a large majority of the major operations are for the relief of injuries inflicted by railroad accidents, has afforded special opportunities for observing the immunity which patients enjoy from hospitalism on the one hand, and the rapidity and permanency of reaction on the other, when treated by this method.

The merits I claim for the method of treatment just considered are:

1. Simplicity.
2. Availability.
3. Safety.
4. Invulnerability.

At my request, for the purpose of testing the protective power of albumen in a coagulated state, the following experiments were made by my friend, Mr. George W. C. Phillips, an accomplished chemist of Jersey City:

"October 13, 1884, I took twelve test-tubes which were carefully cleaned, heated to a red heat, and inverted to prevent the lodgment of any foreign matter. When cool, six were filled about two-thirds full with freshly-prepared beef tea. They were then placed in a bath of boiling water. Five were covered with linen, previously prepared by coating with blood serum subjected to heat in a hot-air bath for the purpose of coagulating the albumen.

"The tubes were then removed from the bath, together with the one which was left open as a check.

"They were all placed on a shelf in a drug store, subjected to the ordinary atmospheric impurities met with under such circumstances.

"Of the other six tubes, five of them were covered with the same linen as the others, but not coated with the serum. One was left open, as in the preceding series.

"Within twenty-four hours the beef tea contained in three of the tubes covered with the uncoated linen became milky and turbid, and within forty-eight hours the contents of the remaining tubes were manifestly decomposed. The contents of the open tubes showed much earlier signs of putrefaction.

"The beef tea contained in the tubes with the coated covering is at this date, after the lapse of a period of over four months, perfectly clear and limpid. After the linen had been coated with serum in the hot-air bath, it was dipped into hot water and immediately applied to the tubes.

"January 21, 1885, seven test-tubes were prepared as in the former experiments, all of which were filled with beef tea. Six were covered with linen prepared as in the first series. As before, one was left open as a check.

"Within twenty-four hours the contents of the open tubes were loaded with bacteria, and had assumed the milky appearance indicating decomposition.

"The contents of the remaining tubes at this date remain perfectly clear, showing that the ingress of foreign particles has been absolutely prevented."

In conclusion, I wish it to be understood that this paper has been written as supplementary to one on railroad injuries, etc., read by me before the Surgical Section of the American Medical Association, at its meeting in Washington, D. C., May, 1884, for the purpose of considering more fully what was then in a cursory manner mentioned, viz., the application of hot water as an important factor in the successful treatment of open wounds.—*N. Y. Med. Jour.*

## MODERN TREATMENT OF WOUNDS. By GEORGE T. HARRISON, M.D., Honorary Fellow of the Medical Society of Virginia, etc.

The illustrious German pathologist, Virchow, begins his work on "Cellular Pathology" by the statement, "We are in the midst of a great reform in medicine." In what this reform movement consists, cannot be better characterized than in the words of Helmholz:* "Were I to designate the fundamental error of the olden time, I might say that it pursued a false ideal of the scientific by its exalted estimate of the deductive method, which was one-sided and erroneously defined." As Klebs† remarks: "A comprehensive system of medical theory being constructed on too narrow a basis, scientific medicine must assume an artificial dogmatic character, and withdraw itself more and more from the single basis, of investigation in physical science, observation." The return to the experimental basis, and the results ensuing therefrom, Helmholz thus describes: "The endeavor was made to understand one of the vital processes where any sort of way was seen. It was supposed that they are intelligible, and the result corresponded to this supposition. A subtle and complete technical science has been now developed for the methods of microscopy, physiological chemistry and vivisection, the latter, especially by the anæsthetizing ether and the paralyzing curare, has made extraordinary advances, and by these means a variety of deep-reaching problems are within our grasp that to our generation appeared still hopeless. The thermometer, the ophthalmoscope, the otoscope and laryngoscope, irritation of the nerves in the living being, give to the physician possibilities of subtle and certain diagnosis where to us absolute darkness still appeared. The constantly increasing number of demonstrated parasitic organisms puts tangible objects in the place of mystic morbid entities, and teaches the surgeon how to prevent the frightfully malignant diseases of decomposition." The aims of the physician and the methods of their attainment he thus designates: "He must strive to know beforehand what will be the result of his interference when he proceeds in this or that way. In order to acquire this foreknowledge of what is to come, or of that which is not yet settled by observation, we have no other method than this—to seek a knowledge of the laws of the facts by observation—and we can learn them by induction, by careful investigation, production, observation of such cases that belong under the law. If we believe that we have discovered a law, then begins the work also of deduction. We have then to deduce, with as much completeness as possible, the consequences of our law; but first of all to be sure only to test them by experience, so far as they can at all be tested, and in order to decide, by this test, whether the law proves to be true, and to what extent. This is a work which properly never ceases. The true natural philosopher reflects in the presence of every new and strange phenomenon whether the best proven laws of action of the longest known forces must receive a modification or not. Of course it can only be a question, in such a case, of a modification which does not contradict the entire store of facts that have been hitherto garnered. Thus, to be sure, he never attains to the unconditional truth, but yet to such high degrees of probability that they are practically equivalent to certainty." In a word, continued progress is only possible in proportion as we catch the spirit of that great system of truth expounded and enforced by Lord Bacon with such incomparable power and eloquence.

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* Das Denken in der Medicin. Zweite Aufl., p. 7.

† Ueber die Umgestaltung der Medicinischen Anschauungen in den letzten drei Jahrzehnten, Von Dr. Edwin Klebs.

Sweeping the whole field of medical knowledge—nay, I might almost say the entire domain of the physical sciences—it may, in truth, be affirmed that the successful application of these principles has nowhere brought forth richer fruits than in the modern study of the treatment of wounds.

To Lister is due the credit, indisputably, of being the first who, in a genuine scientific spirit, endeavored to discover a rational method of treating wounds, conscious of the nature of the problems he had to solve. Let us now ask what these problems are, to the solution of which Lister and those who have since labored in the field have so successfully applied themselves. The ideal after which we strive, in the healing of a wound, is that it should heal like a lesion in which there has been no separation of the skin. We seek to attain this ideal by protecting the wound from the effect of such external dangers which, we assume, are the cause of inflammation and other diseases interfering with the process of healing, just as this is done by the intact skin in the case of a subcutaneous wound. In other words, we strive to keep the wound aseptic.*

Our second problem is, when wounds are already infected, are septic, to make them again aseptic by the application of antiseptic measures. This second problem does not come within the scope of this paper.

Modern experimental investigation has demonstrated fully that the dangers which menace a wound are noxious agents which penetrate into it from without and evoke putrefactive decomposition, and that these noxious agents are micro-organisms belonging to the group of the schizomycetes (bacteria). The immediate effect of these micro-organisms on the living tissue is to produce an alteration of its nutrition, and this they do by deoxydation of its chemical constituents. The nutritive disturbance produces a change in the composition of its products of secretion ; these latter now lead partly to local inflammation, and partly alter the blood and fluids of the body by absorption, and evoke those phenomena which we comprehend under the name fever. Locally, follow as further changes the different forms of inflammation which are designated as erythema, erysipelas, phlegmon, diphtheritis, etc., and which terminate in resolution, suppuration or gangrene, and on their side again act on the body in a variety of ways, and produce diseases that are comprehended under the terms traumatic fever, septicæmia and pyæmia.

Let us now turn our attention to the solution of the first problem above propounded, which, as stated, is, How is a fresh aseptic wound to be maintained in an aseptic condition? Or, to put the question as it generally presents itself to the surgeon, *What is the method of performing an aseptic operation?* It may be laid down as a well-attested fact, at the outset, that a wound made in an operation may be kept aseptic without the use of any disinfecting or antiseptic agents, provided the strictest cleanliness is observed—cleanliness, however, not in the sense in which the term is usually employed, but cleanliness in the scientific sense, which implies that the wound shall be kept free from all putrefying bodies, all bodies capable of exciting putridity, or such as produce specific fermentation. This can only be accomplished when the operating surgeon and his assistants are completely aseptic, when all instruments used are equally so, and when the subject on whom he operates has been made thoroughly aseptic, as well as the operating table. In addition to these requirements it is of paramount importance that the operation should not last too long, and that it should be performed in a room filled with relatively pure air. Contrary to the views resulting from *a priori* reasoning, experience of competent observers has, I think, fully shown that the great danger to a wound is not from the germs which are precipitated upon it from the air, but from micro-organisms that are brought in contact with it by the fingers, instruments and pieces of clothing, in case they are not aseptic. How many surgeons, it may appropriately now be asked, can fulfill all the conditions above enumerated? A few there may be. When we are called upon, however, to treat a wound we have not made ourselves, no matter how recent it may be, we may safely assume that it is septic, and antiseptics are absolutely required. And here let me quote the language of the distinguished professor of Goettingen, Koenig, to whom I am greatly indebted in the preparation of this paper. "If we are now able," he says, "to perform operations aseptically in the above-mentioned sense, without the proper antiseptic apparatus, we are not then to imagine, as has been occasionally asserted, that we operate in defiance of Lister and the antiseptic method, and that the entire procedure of Lister and his followers is a useless one. Any one who has followed our arguments must admit that just this fact is the greatest triumph of the antiseptic method of treatment, a triumph which would never have been celebrated without Lister." Two indications naturally present themselves in the treatment—first, to keep the wound in an aseptic condition up to the time when the dressing is applied; and, second, to apply such a dressing that the wound shall be maintained in a continued aseptic condition until the dressing is changed or the wound is healed. For the performance of an aseptic operation, *the first thing* that should claim our attention is the operating table. It should be absolutely free from blood and pus, and should be thoroughly disinfected beforehand with a five per cent. solution of the carbolic acid, or with a solution of corrosive sublimate (1:1000). The blanket, sheet, or other covering should, as a matter of course, be perfectly clean.

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* As confusion may arise in the minds of some from the use of the terms *aseptic* and *antiseptic*, it may be well to state that *asepsis* implies a procedure which maintains a condition of freedom from septic infection as it already exists ; *antisepsis*, on the other hand, establishes the condition of asepsis after sepsis has existed.

*Second.*—The field of operation should be carefully cleaned. If possible, it is advisable to give the patient a general bath the day before the operation. As a rule, it will be sufficient to wash the surface which is the seat of operative procedure with soap and water; if the skin is oily, ether or spirits of turpentine will be found very useful. Hairs in the vicinity of the line of incision are to be removed by a razor. After this preliminary purification, the surface in question should be thoroughly disinfected with a five per cent. solution of Calvert's carbolic acid, or with a solution of corrosive sublimate (1:2000).

*Third.*—The surgeon should not only make it a matter of conscientious duty that his own hands are made aseptic, but also see to it that the hands of those assistants which may come in contact with the wound are equally aseptic. In the practical application of this principle, it is necessary to wash carefully, not only the hands, but also the arms, with soap and water, using the nail-brush vigorously for the thorough cleansing of the nails, and then disinfecting with a solution of corrosive sublimate (1:2000). As the danger of infection increases with the number of hands brought into contact with the wound, it is better that the surgeon alone should touch it, if possible, or that the aid of one assistant only should be invoked in the event that the surgeon, unaided, cannot cope with the difficulties presenting themselves. When it is necessary to introduce the hand into the abdominal cavity, after laparotomy, it should be previously disinfected with an emulsion of iodoform, made by rubbing up iodoform with glycerine. And it is well to bear in mind that during the performance of an operation, every time the surgeon has to bring his fingers into contact with the wound he should previously dip the hand into the antiseptic solution. The arms of the surgeon and those of his assistants should be bared, the sleeves well rolled up, a clean linen apron without sleeves substituting the coat, or, if preferred, an apron of rubber may be used.

*Fourth.*—The instruments used must be strictly aseptic. They should be first carefully cleansed with silver soap or an equivalent, then boiled in water for half an hour, and finally be put in a vessel of glass or porcelain containing a three per cent. solution of carbolic acid. These measures should be preliminary to each operation, however trivial. For cleansing the wound of blood in small operations, it will be sufficient to use borated or salicylated cotton dipped in a solution of corrosive sublimate (1:2000). In larger operations, it is necessary to make use of sponges, and it is a matter whose importance cannot be exaggerated to have them aseptic beyond peradventure. The way I prepare them is according to Dr. Keller's method. They are first washed in hot water repeatedly, then dried, and afterwards beaten until they are free from sand. They are now soaked in a solution of potassium permanganate (1:500) for twenty-four hours, then washed in pure water again and again. They are now put in a one per cent. solution of sodium hyposulphite, to which is added an eight per cent. solution of pure muriatic acid; after the lapse of a quarter of an hour they will be bleached white. They are again washed repeatedly in pure water, and preserved for use in a five per cent. solution of carbolic acid. In regard to the use of the spray, it has been now decided by a preponderating majority of surgeons that it is unnecessary.

*Fifth.*—Bleeding vessels are to be tied with catgut. The best method of preparing it, in my opinion, is Neuber's modification of Kuemmell's. The catgut is first cleansed with soap, and then placed for twenty-four hours in a solution of corrosive sublimate (1:1000), and finally kept in a solution of corrosive sublimate and alcohol (1:1000). I have found it convenient to wind the catgut round a small vial, as if it were a spool, and to prevent it from becoming unwound the terminal piece is put into the mouth of the vial and secured by a cork. The catgut is now put into a wide-mouthed, glass-stoppered bottle containing the disinfecting solution.

*Sixth.*—The method of closing the wound and the provision made for drainage must finally claim the attention of the surgeon. The material for the suture should be either silk or catgut. The silk is made aseptic by being boiled in a five per cent. solution of carbolic acid for a quarter of an hour, and then preserved in a five per cent. solution of the same acid (Czerny's method); or it may be simply boiled in water and then preserved in a solution of corrosive sublimate (1:1000). As a rule, the interrupted suture answers all purposes, though when catgut is used I have found, as Neuber recommends, the continued suture to accomplish the purpose very satisfactorily, especially in vaginal operations. For purposes of drainage, rubber tubing or Neuber's decalcined bone tubes are generally used. The rubber should be boiled before using, and kept in a five per cent. solution of carbolic acid, and before being introduced should be powdered with iodoform. The advantage of the decalcined bone drainage tubes is that they are susceptible of absorption. Before the sutures are applied and the drainage tubes introduced, the wound should be thoroughly washed with a solution of corrosive sublimate (1:2000) by means of Esmarch's irrigator. After the wound is closed the same process should be repeated.

The wound up to this point being aseptic, all of our endeavors hitherto having been directed to the accomplishment of this end, our next problem is, to apply such a dressing as will maintain this aseptic condition. The dressing of Lister is doubtless familiar to you all. I need, therefore, scarce remind you that it consists first of a narrow slip of silk-protective to cover the wound. And you know the object of this protective, which was to protect the wound from the too irritating effect of the carbolized gauze. Over this was placed six or eight layers of carbolized gauze, which was first dipped in a solution of carbolic acid (1:40) (in the case of the first dressing sometimes as strong as 1:20, and wrung dry), then followed eight layers of dry, carbolized gauze; between the seventh and eighth layers a piece of Mackintosh, which was first dipped in a solution of carbolic acid, was inserted. The whole was secured in place by means of a bandage made from the carbolized gauze.

The eminent German surgeon, Volkmann, introduced some changes and improvements in Lister's method, which have been adopted extensively, not only in Germany, but here and elsewhere. In the first place, he discarded the silk-protective, which he found unnecessary, and as the cost is considerable this is not an unimportant matter. The most thorough modification, however, which he made was to apply such a dressing as would produce *uniform compression* upon the wound and its vicinity. To this end, pieces of carbolized gauze are cut, each about the size of a pocket hankerchief; they are then in succession dipped in the antiseptic solution, wrung out, gathered together loosely without regard to definite arrangement, and pressed against the wound and its vicinity one after the other. Around this primary dressing is laid salicylated cotton or jute, and the whole secured in place by an aseptic bandage. Over this again a larger dressing is placed, corresponding to the original Lister dressing, but much larger, and this is secured also by a bandage.

Of late, instead of the carbolized gauze, a gauze made aseptic by corrosive sublimate is used, and solutions of corrosive sublimate (1:2000) generally have taken the place of the carbolic acid solutions. Iodoform, whose use has been hinted at, has in the hands of some surgeons a most extensive application, but time would fail me to enter into any details. Its use constitutes a theme in itself.

The endeavor has been made by surgeons for some time past to apply such dressings as could remain intact until the wound was nearly or entirely healed. This method has been systematized and successfully carried out by Neuber in the so-called permanent dressings at Esmarch's clinique. "Our wound treatment," he says,* "closely follows Lister's procedure. It is thence, in the first place, *antiseptic;* but, secondly, it was our endeavor to effect the healing of wounds, if possible, under one dressing, with the avoidance of every disturbance of the wound-rest. Consequently, *to the antiseptic method* was added the principle of the application of long-lying dressings, instead of a change of dressings formerly customary.

Fundamental arrest of the bleeding, faultless antisepsis, energetically absorbing dressings, sufficient compression, certain drainage of the secretions, are important factors for the success of the permanent dressings." Peat is extensively used in these dressings. Bags of different size made out of sublimated gauze, the size being determined by the portion of the body to which it is to be applied, are filled with peat, and are now ready for use. A smaller bag, similarly filled with peat, is laid directly on the wound, after previously having been dipped in a solution of corrosive sublimate (1:2000), and is kept in place by a bandage made aseptic. One of the larger bags, covering in the wound and its entire vicinity, is placed over the first, and fixed by a bandage. Catgut sutures and bone drainage tubes were chiefly used.

Quite recently Neuber has modified his method so as to give up drainage for all fresh wounds. He effects this mainly by avoiding the formation of cavities within the wound. He therefore applies compression from without, buried catgut sutures, depression sutures and skin implantation. In regard to the use of buried sutures, an illustrative example will explain the principle. Says Neuber: "Figure A indicates schematically the anatomical relations of a subcutaneous tumor. We have to deal with a lipoma of the region of the shoulder. After extirpation of the tumor a depression showed itself on the outer edge of the lower wound-surface, in which a prolongation of the removed lipoma had been imbedded. The opposite lying skin flaps could be pressed into this valley-like depression only by strong pressure, and, in order to maintain it permanently in this position, it would have been necessary to exert a pressure, by the dressing, annoying to the patient, dangerous to the nutrition of the skin flaps, and, moreover, uncertain in its effects. The flaps of L and B were, therefore, brought into permanent contact with the underlying parts by superficial buried sutures in manner shown in Figure B, and afterwards the edges of the wound were closed by a continuous suture." The meaning of the other terms used by Neuber, 'depression sutures' and 'skin implantation,' will be understood if you will bear in mind that his method, in the case of a deep wound, is to detach the skin on each side so as to make it movable, and to turn it into the bottom of the cavity, sutures being passed at the seat of inversion.

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* Vide Anleitung zur Technik der Antiseptischen Wundbehandlung und des Dauerverbandes.

Thus, in the operation for removal of a breast, the seat of carcinoma and the corresponding axillary glands, he says, "After cleaning out the axillary cavity, the upper and lower edges of skin there were somewhat detached and turned into the bottom of the cavity, and then their free edges were united by two sutures each with the inner surface of the pectoralis minor and subscapuarlis respectively."

"The value of any method of wound treatment," says Gussenbauer,* "is determined by two chief factors: on the one part, by the mode of healing which it is fitted to produce; and, secondly, by the influence which it has on the accidental wound diseases." The antiseptic method can well afford to be tried by this standard.

In regard to the first criterion, let me quote the opinions of one of the greatest of modern surgeons, Billroth, as found in the last edition of his work on "Surgical Pathology," edited by Von Winewarter: "If you get for treatment," he observes, "a complicated excavated wound soon after the accident, and treat it according to Lister, you will notice about the following: 1. A great part of the wound heals *per primam intentionem;* extensive pockets, out of which the secretion was carried off by drainage, heal without any difficulty. 2. The wound-secretion does not decompose even when the dressing remains lying several days. 3. Dead tissue parts on the surface of the wound are detached or are absorbed, if they have slight volume, without becoming decomposed beforehand; they remain completely devoid of odor. 4. If there is a coagulum of blood in the depth of the wound cavity, it frequently becomes organized, migratory cells pervading it and developing into connective tissue, without decomposition of the extravasated blood. 5. If the wound does not heal *per primam,* still all inflammatory symptoms are usually absent, the edges of the wound are almost without reaction, at most a little swollen; no reddening, no pain, no plastic infiltration, no œdema of the vicinity of the wound. 6. The healing process, by the formation of granulations in the depth of the wound-cavity, takes place mostly without proper suppuration. A muco-serous secretion is secreted which dries in the dressing to a yellow crust. Suppuration is not always entirely avoided, yet, in this case also, the quantity of the pus is considerably less than under the ordinary dressing. 7. In correspondence with the painless local cause, free from reaction, the reaction of the general condition is almost zero. 8. Finally, it should be adduced as an advantage of the Lister procedure that the duration of the healing process in the wound is, in general, far shorter."

The second criterion adduced by Gussenbauer as a test of the value of any method of treating wounds, relating to its influence upon accidental wound diseases, is the touchstone which has proven most conclusively the merit of the antiseptic method. Von Nussbaum, in his beautiful little treatise upon this theme,† gives a most graphic description of the condition of his clinique before he used the antiseptic method, pyæmia, hospital gangrene, lymphangitis and erysipelas prevailing to a most frightful degree. "Any one," he says, "who witnessed these deplorable conditions, and saw how they were all extinguished without exception by Lister's method, as by enchantment, must say to the entire world that the greatest of all discoveries in surgery has been made, and that thousands are saved from death by Lister who had formerly been its certain prey, that thousands are now healed without pain who otherwise would have left their sick beds with mutilated limbs, after endless pains. Now go through my clinical rooms; the patients lie in bed without pain, looking serene and generally healthy. Nowhere do you find erysipelas, nowhere phlebitis, not a single case of hospital gangrene has been observed any more, pyæmia has disappeared, complicated fractures heal beautifully, wounds of the head, almost all of which formerly died of pyæmia, heal now in a few days, amputations, plastic operations, heal *per primam intentionem*," etc.

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* Vide Die Traumatischen Verletzungen. Deutsche Chirurgie, Lief. 15.

† Leitfaden zur Antiseptischen Wundbehandlung, Vierte Auflage.

The testimony of the eminent surgeon, Volkmann, is equally clear and decided. In his monograph on "Modern Surgery," he says:* "In these eight years" (he refers to the period during which he has been using antisepsis) "in which I, in connection with my assistants, treated about three thousand major operations, not a single one of our wounded or operative cases died of pyæmia; no case of this disease originated in my clinique." "With regard to septicæmia," he continues, "I can only say that those acute forms, by which the old traditional morbid picture of septicæmia was delineated, did not originate among the patients, in the case of whom our therapeutical procedures were limited to the trunk and extremities; that the identical processes developing after operative opening of the large cavities of the body were avoided *easily* in the pleura, with *somewhat less certainty* in the cavity of the skull, and somewhat *less certainty still* in the peritoneum. In the pleura not a case of failure occurred. On the skull I trepanned twenty-seven times, or made extensive resections; twenty-two of the patients were healed, five died.

"Finally, erysipelas. In my clinique, on an average, during these eight years, scarcely a case a year of traumatic erysipelas has occurred." If any unbiased surgeon reads these two monographs by Von Nussbaum and Volkmann respectively, and fails to be convinced by their facts and arguments, I can only say that it must be because, in the language of another, "he casts the shadows of his prejudice upon that which is true, and fails to see the fair face of truth through the darkness." It is a ground of thankfulness, however, that doubt in regard to the antiseptic method, which at first hung like a thick mist over a lovely landscape, has almost vanished. And in concluding this brief and necessarily imperfect sketch, it is not the language of hyperbole to say, antisepsis, like a star newly risen, has grown more luminous day by day, and now shines resplendent in the glory of its zenith, and immortal will be the renown of those true benefactors of mankind who have taught us how to understand and appreciate its value—the great thinkers, Pasteur and Lister.—*Transactions of Medical Society of Virginia*, 1884.

HYDROCHLORATE OF COCAINE, OR MURIATE OF COCAINE.—Since the short account given in the last pamphlet *(Squibbs' Ephemeris*, vol. ii., No. 6) of the new local anæsthetic, the whole of the writer's available time has been given to the subject, with some results that are worth publication.

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* Sammlung Klinischer Vortraege, No. 221.

The name of the salt brought so suddenly into prominent use has been liberally discussed, and the views of many eminent chemists of the country upon it have been published. The writer is not sufficiently acquainted with the chemical philosophy of modern nomenclature and notation to form an intelligent opinion upon the subject, and therefore has no theory to present in support of any name. The fact that more than twenty good authorities, among whom are some of the most prominent chemists of the country, have given their opinions without any great degree of unanimity, and with the suggestion of five or six different names, shows that there is no universally accepted principle or basis of nomenclature upon which the names of such salts can be accurately constructed; and it farther shows that the names which come nearest to accuracy of expression, according to modern views, are longest, most complex, least convenient and least euphonious, and, therefore, are least adapted to common use. Each hypothesis of the yet unknown construction of the molecule of the salt requires a different nomenclature, and gives room for many well-supported names, but all that can be justly claimed, up to this time, is, that some names are less objectionable than others; and that, leaving out those which are least objectionable in point of scientific accuracy, though most objectionable for common usage by reason of their inconvenience, the name Cocaine Hydrochloride is preferred by most chemists. Prof. H. B. Hill, of Harvard, however, says that while he never uses such names as hydrochlorate without mental protest, yet any departure from well-established usage is to be deprecated, unless it be to gain very obvious practical advantages. Then, as there is no very obvious practical advantage to be gained from a change, and as most standard authorities give hydrochlorate, the writer prefers to adhere to the established name, especially in view of the expectation that the true construction of the molecule of these salts of the alkaloids with hydrochloric acid will sooner or later be shown beyond question, and this might require a change from any name now adopted. It is, however, certainly time to abandon the very old nomenclature by which such salts are still often called muriates. It may possibly aid the chemists in the study of cocaine to know that it probably has two definite hydrates, and two crystalline salts with hydrochloric acid.

A process by which to obtain a salt of cocaine for use seems now to be of far more importance than a change of name, and it is probable that the salt with hydrochloric acid at present generally used is the best, first, because it forms a salt with the largest proportion of alkaloid, and is easily crystallizable with the smallest proportion of water; and, secondly, because it is very soluble, and but slightly, if at all, deliquescent. The salicylate is said to be a very good salt, and solutions of it would be likely to need no protection in keeping, but the high combining number of the acid would give a much weaker salt and one that is probably much less soluble. Therefore, for the present, at least, the hydrochlorate appears to be the preferable salt.

Up to the time of the last note on this subject, a modification of the process of Lossen for extracting the alkaloid was found to be least objectionable, but on increasing the scale of its application difficulties were soon met with, and it was found that much of the alkaloid was split up and lost. In short, it was found that this and some other processes yielded more benzoic acid than cocaine, and many losses and disappointments occurred in learning the important lesson that the alkaloid, when set free from its natural combinations in the leaf, was split up or decomposed at a comparatively low temperature, yielding benzoic acid and an alkaloid or glucoside, or both, that contained no cocaine, or only traces. In the search for less costly solvents than alcohol and ether, it was found that amylic alcohol did very well under certain conditions.

The ground or unground leaves, moistened with a solution of carbonate of sodium in water, and then dried at very low temperatures, were easily exhausted by means of amylic alcohol, the free alkaloid being very soluble in this menstruum. Moistening with dilute solution of caustic soda, both in water and alcohol, and drying, was tried. These also were easily and probably completely exhausted by amylic alcohol in the cold, but a large quantity of the menstruum was required, and the washing out of the alkaloid by acid water was laborious and troublesome, and gave the alkaloid in a dilute and voluminous solution that was necessarily very acid, since, if the water was not strongly acidulated, it did not separate well, and if too strongly acidulated it was dissolved to a clear solution by the amylic alcohol.

The advantages, however, were that the alkaloid washed out of the amylic alcohol as a sulphate was comparatively free from color, giving but little trouble in decolorizing, and the amylic alcohol was recoverable by distillation, with a very small loss, and in a perfect condition to be used again. The tedium of drying at so low a temperature, before the exhaustion, and the laborious washing of the percolate, caused the solvent to be abandoned, although it deserved a more careful investigation, and after many other trials and vexatious disappointments, and very much loss of time and valuable material, the following modification of the original process of Nieman was reached, and has proved quite successful.

Unmodified, Nieman's process had already failed several times when used on any considerable quantity of material, so that it had been passed as impracticable. His process of assay was also found to be defective, and therefore it is unnecessary to give the process, especially as the steps adopted here from them were not original with him, but were commonly applied to other alkaloids at the time of his investigation. A good abstract of his process may be found in the English edition of Gemlin's Handbook, Vol. xvi., page 301.

A convenient scale for the extraction of the alkaloid is to take for each operation 45 kilos or 100 pounds of the ground leaves, passed through a No. 20 sieve (20 meshes to the linear inch). This powder is moistened with an equal weight of alcohol of about 92.5 p. c., to which has been added one fifty-eighth to one-sixtieth of its weight of sulphuric acid of a s. g. of 1.483. That is, 12 grains of the acid to each pound of the alcohol. The moistened powder is packed firmly in a stoneware percolating pot, and the process of repercolation is applied to it, as applied to tea, only that the portion of weak percolate used to moisten the second and every other succeeding portion of 100 pounds is acidulated in the same way that the first portion of alcohol was before it is poured upon the powder. The first or strong percolate of the first two portions may be taken together when they represent about 100 pounds of the powder, and the alcohol recovered from them by distillation for use again in continuing the repercolations.

If the process of repercolation be not applied, but each 100 pounds be exhausted and completed separately, the quantity of alcohol required for complete exhaustion is about five times the weight of the powder, and the loss of alcohol in the process is from 25 to 30 p. c. under the best management. But by repercolation the loss may be reduced to less than 20 p. c. When the alcohol is all distilled off, the still is uncovered and 10 pints, or 4,750 c.c. of water for each 100 pounds of coca represented, is thoroughly mixed with the hot liquid extract.

The whole is then transferred from the still to a glass jar and allowed to become cold. It will then have separated into an upper almost black stratum of chlorophyl and other extractive matter insoluble in water, and a lower, watery, acid solution containing the sulphates of the alkaloids. This watery layer is drawn off by a syphon into a filter, and filtered into a bottle of about three times the capacity of the liquid. The extractive matter is then again washed, by agitation, with about two pints or 950 c.c. of water, and separated as before, the watery portion being added to the first. Add to this about one gallon or 3,800 c.c. of stronger ether and then a considerable excess of carbonate of sodium—about 10 ounces or 284 grammes of the crystals for each 100 pounds, or 45 kilos of coca. Shake this mixture well, allow it to separate, syphon off the lower, watery solution, and wash this again by active shaking with a second gallon of stronger ether. Draw off the liquid and repeat the ether washing a third time.

Collect the ethereal solution of the alkaloids in a flask placed in a water-bath, and recover the ether for use again. Dissolve the ether residue of alkaloids in water acidulated with sulphuric acid in the proportion of 12 grains to the pound, or .17 p. c., using enough to make the solution decidedly acid. Shake this acid solution of the alkaloids with about one-fourth of its volume of stronger ether repeatedly, until the ether comes off colorless, or nearly so. Then precipitate the solution again with carbonate of sodium in the presence of ether, as before, washing the mother waters with ether by shaking in the same way.

Collect the ethereal solution again in the distilling flask, and again distill off the ether to about two pints or 950 c.c. to the 100 pounds, or 45 kilos of coca. Transfer this to a tared beaker while hot, and set it in a warm place until the remainder of the ether has evaporated, stirring frequently to prevent the crystals from forming in a solid mass or cake. If the crystals be kept in a loose, granular condition by this stirring, they are easily dissolved without much loss of time, but if allowed to form in a solid mass they are very difficult to dissolve. A brownish-yellow mass of loose crystals of crude alkaloids will remain, weighing—according to the quality of the coca used—from 100 to 200 grammes to the 45 kilos or 100 pounds of coca, if the drug has not been below a fair quality, as determined by an assay before being bought. Pour on this mass of crystals about half its volume of water, and then add concentrated sulphuric acid in the proportion of about 12 c.c. to each 100 grammes of crystals, with constant stirring until the crystals are dissolved, and the solution is very slightly acid. Then dilute the solution to about five times the weight of the crystals.

Then arrange a cylindrical percolator of such capacity as to be about half filled by a weight of moist, purified and well-washed bone-black equal to the weight of the crude alkaloid, and filter the solution through this at a rate not faster than about ten to fifteen drops per minute; the slower the rate the more perfect the decolorization will be. But the bone-black used must be of good quality, and of such quality as it is almost impossible to get without making it.

The writer is very much indebted to his friend, Mr. P. Casamajor, for lifting him out of the bone-black Slough of Despond. Good effective bone-black must be pure carbon in the peculiar state of aggregation given by the burning and washing. It should be perfectly black in color, and when boiled with dilute solution of caustic potassa should yield a colorless supernatant liquid. If not well burned the liquid will have a brown tint. Burned from a platinum foil it should leave no residue, or merely traces. It should be in fine powder, and after being well washed, first with hydrochloric acid and then with water, it need not be dried, but simply be drained and kept in a moist state for use. Bone-black bought in the market at $1 per pound, and labeled chemically pure, proved very inefficient until re-burnt; whilst good sugar-house bone-black when re-burnt and washed was much more effective. For decolorizing so valuable an alkaloid the bone-black must be simply pure carbon, for that absorbs the smallest amount of the alkaloid, and gives up no foreign matter to the solution filtered through it, and the solutions subjected to its action should be rather dilute—say, one in five—and be either natural or slightly acid.

The solution should come through this percolator quite colorless at first, and when all through and the black washed clean with about four times its volume of water, the entire solution and washings should be not deeper than a full straw color. This will be the result if the bone-black be of good quality, and in an active condition; but it is worthy of note that a bone-black may answer the tests by caustic potassa and by burning without residue, and yet have a very feeble decolorizing power. The bone-black after use is not thrown away, as it contains much alkaloid, which can be extracted by digestion and agitation with carbonate of sodium solution and ether. By the use of a larger quantity of black the whole solution might be obtained colorless, but the loss by the use of bone-black is very considerable, and is proportionate to the quantity used, and the farther decolorization is not, at this time, worth the cost of obtaining it, because the coloring matter is inert and unirritating, and when in so small a proportion as to give only a yellow color it does not practically affect the weight of alkaloid. The dazzling whiteness of some salts of the alkaloids, such as those of morphine and quinine, is very beautiful, but desirable only from an æsthetic point of view, since it adds nothing to the effects of the salts. Indeed, the processes by which it is attained are often, if not generally, damaging to the alkaloids.

When the solution has all passed through the black, and the latter has been washed with about four times its volume of water by percolation, the whole decolorized solution and washings are collected in a bottle, and solution of carbonate of sodium, one part crystals in five of solution, is added, a small portion at a time, with active shaking between the additions, until the contents of the bottle remain permanently quite opaque from precipitated alkaloid, requiring about 30 c.c. of carbonate of sodium solution to the 100 grammes of crude alkaloid. This first precipitation consists mainly of the useless and inert alkaloid—the hygrine of the coca, and to separate it the opaque solution is actively shaken with one-sixth to one-eighth of its volume of stronger ether. This dissolves all the precipitated alkaloids—cocaine as well as hygrine—but a large proportion of the ether is dissolved by the watery solution, and this portion probably holds a share of the alkaloids. The ethereal solution is then separated, and the ether washing repeated, using about half the quantity of ether the second time.

These ether washings separate the hygrine imperfectly under the best management, but are practically sufficient until some better plan can be devised. But when they separate it most perfectly they also take with it a portion of cocaine, and therefore they are kept for another process of solution and separation when they have accumulated.

The solution of sulphate of cocaine, now sufficiently freed from hygrine, is then transferred to a precipitating jar, and the carbonate of sodium solution is slowly added to it, with constant active stirring until a small portion of mother-liquid, filtered off, gives no cloud on adding a drop of the precipitant. The whole is then well stirred, and allowed to stand overnight. The clear supernatant liquid is then drawn off into one or more bottles, which are about half-filled with it, and the precipitate is collected on a filter and well washed with water until the washings come off tasteless. This washing is more effective when the clean washed upper stratum of the precipate is taken off two or three times as the washing proceeds. The mother-liquor and washings collected in bottles are washed twice, each time with about one-eighth of their volume of stronger ether to recover the alkaloid retained in them. The ether from these washings is recovered by distillation, and the alkaloid, amounting to about .1 p. c. of the total quantity precipitated, is carried on to the next portion. The washing of the precipitated alkaloid is only carried on until the washings come off tasteless, or nearly so. Of course, they might be carried farther, or until they gave no reaction for either sulphuric acid or sodium, but this would involve a practically useless loss of alkaloid, since it is not quite insoluble in water. The washed magma is then spread upon a flat-bottomed drying vessel or tray and dried at a very low temperature—say, not over 50° C = 122° F.

In drying, the cake breaks up into white, light, porous fragments, somewhat resembling heavy magnesia. This is a hydrate and carbonate of the alkaloid cocaine, containing more or less of the inert hygrine, according to the management, and in this condition it is kept for conversion into any salt that may be desired. When the hydrochlorate is to be made from it, a portion is put into a shallow evaporating vessel—flat-bottomed, if possible—and is just moistened with water. Strong hydrochloric acid is then added cautiously, in small portions, with constant stirring, until the alkaloid is exactly saturated, and this solution is then evaporated at a low temperature. Managed in this way, the evaporation is reduced to a minimum, and in a proper flat vessel takes but little time and heating. The evaporation is allowed to go on spontaneously, until a thick pellicle is formed on the surface. When this is broken up by stirring, the solution is a perfectly transparent, syrupy liquid, of a full light-yellow color—not colorless—of about the consistence of ordinary varnish, which it much resembles. Often, on being disturbed by the stirrer, and always after a little stirring, the whole mass suddenly crystallizes in very small crystals, with the evolution of a gas supposed to be carbonic anhydride, forming an opaque, pasty, semi-liquid mass. This is then stirred constantly until it is entirely dry—and it is known to be dry when it can be rubbed up and passed through a sieve No. 40. Of the perfectly dry hydrate of the alkaloid, 100 parts yield about 114 parts of the dry hydrochlorate.

The net yield of either alkaloid or salt from any given lot of coca cannot, as yet, be accurately stated, because the several residues cannot well be worked up separately. First, there is the chlorophyl and extractive matter, which contains some alkaloid, and is, therefore, not thrown away, but is set aside for farther working. Then the alkaline solutions, after the ether washings, all contain alkaloid, most of which appears to be held there by the dissolved ether. Then there is the very valuable proportion that is washed out with the hygrine, making, altogether, a residuary proportion which, by rough estimate, may amount to 2 p. c., that is recoverable, though at considerable expense for ether, time and labor. The yield of crude, mixed alkaloids, is always easily obtainable, since they are dried in order to get at the proportion of solvents and bone-black needed in the purification. But these crude alkaloids yield very differently to the process of purification as they contain more or less hygrine and products of decomposition. Occasionally they have not yielded more than one-half the weight of the crude alkaloids, while occasionally the loss seems to be not over 20 p. c. A longer experience, with better coca, is required before any very definite account of net yield can be given; yet it is very apparent that all the cocas worked give a considerably larger yield than was indicated by the old process of assay, and by the first experience in the extraction.

One lot of 164 pounds or 74,545 grammes yielded 319 grammes, or very nearly .427 p. c. of crude alkaloids, and about 34 p. c. of the finished salt. This was a lot of young and very green leaves, and cost $1.50 per pound. It appeared to be very good coca, though evidently not mature. Gathered when too young, but well cured and well packed.

Another lot of 280 pounds or 127,272 grammes yielded 409 grammes of crude alkaloid, or .321 p. c., and about .27 p. c. of finished salt. This was a lot of mature leaves, not green, but of very fair quality of the brownish grades, the best that could be selected in the New York market within the past three months. This lot was bought before the rise in prices, and cost 65c. per pound.

These two lots were worked after a little experience with the above given process, and represent the best results attained at this writing, though two or three other lots of green coca gave somewhat similar results, whilst four smaller portions were entirely lost in reaching the process.

The above given process does not pretend to be a very good one, but only the best that could be reached by the writer in two months or more of close unremitting application to the subject. Those more familiar with the extraction and purification of the sensitive alkaloids may all have better processes for this one, but if they have, they have not published them. It is, at least, an effective working process, yielding a very good alkaloid in considerably larger proportions than is given in any published account of the extraction, and it is expected that with farther experience and improvements in the details, the net yield will be still farther increased, especially when better coca is attainable. But it is an expensive process in solvents, time, labor and apparatus, and, from the value of the product, is especially risky by breakage and accidental losses. The actual loss of alcohol by the process is not short of 20 gallons to the 100 pounds of coca, and of stronger ether about 12.5 pounds, making, in these two items alone, a cost of not less than $54.00 per 100 pounds of coca for these heavily-taxed solvents, which in other countries, or in this, without the alcohol tax, would not cost more than one sixth of that, or $9.00 per pound of coca.

The coca that has been accessible in any of the markets within the past three months has all been of low quality, and very variable, some of it yielding no alkaloid at all, though not differing in appearance from others that yielded in fair proportion, so that it has not been safe to buy without a previous assay of samples, and hence a good assay process became very important. The writer soon found that a process previously given was not a good one, and it had to be abandoned. The two lots of coca, the details of which are given above, when assayed by the process alluded to, gave respectively only about .19 and .16 p. c., but by a new process now to be given they gave much higher results, which were in fair practical accord with those obtained in working on the large scale.

This new process of assay is based upon the process of manufacture, and is as follows:

Take 50 grammes of the sample after being powdered and passed through a sieve of 60 meshes to the linear inch. Moisten the powder with an equal weight of alcohol of 92 p. c., to which has been added one-sixtieth of its weight of sulphuric acid s. g. 1.843. Allow the moistened powder to stand in a covered vessel for 3 or 4 hours, and then pack it firmly in a cylindrical percolator. Percolate it with alcohol—not acidulated—until 250 c.c. of percolate have been obtained. This percolation is very much facilitated by the use of a Sprengel water-pump, such as is used in laboratories for rapid filtration. Without this pump the percolation is slow, and will require a day and a night. With the filter pump 3 hours is sufficient. Evaporate the alcoholic solution in a shallow, broad capsule at a low temperature until it is reduced to about 10 c.c., and then add to this 25 to 50 c.c. of water, applied in two or three portions, carefully washing out all that is soluble in water from the clots of chlorophyl and resinous extractive matter. Filter the solution into a flask or separating apparatus, add to it an equal volume of stronger ether, shake vigorously, separate the solution, add half its volume of ether, and again separate the solution. Add to this an equal volume of ether, and then solution of carbonate of sodium in excess, and shake vigorously. When now the liquids separate, a drop of the solution of carbonate of sodium should produce no cloud in the lower stratum of liquid. Separate the ethereal portion, put it into a tared beaker, wash the watery liquid with half its volume of ether, and add the ether to that in the beaker, and set this in a warm place until the ether is all evaporated off. Then pour upon the residue in the beaker 4 c.c. of water, rinse it round well, without a stirrer, and having poured it off, dry the contents of the beaker, weigh and subtract the tare. The net weight is the crude alkaloids with much coloring matter. On an average a deduction of 20 to 25 p. c. of this weight will give a close approximation to the cocaine contained in the sample.

Allowing the moistened powder to stand 3 or 4 hours allows the powder better to absorb the menstruum, but it is not an important step, since the amount of percolate prescribed completely exhausts the coca without the digestion, if the powder be as fine as is directed and the percolation well managed.

The washing of the acidulated solution of alkaloids from the alcohol residue is an important step, as the soft, green, resinous clots are liable to retain a portion of the alkaloids. The preliminary washing of the acid solution with ether removes a considerable proportion of coloring matter, which, if left in, would be taken up by the ether with the precipitated alkaloids and vitiate the results, while the ether takes little alkaloids from the acid solution. It doubtless takes some alkaloid in the water which it dissolves, and the use of ether previously saturated with water would avoid this slight loss. The alkaloids precipitated by the carbonate of sodium are at once dissolved by the ether, and a small portion of the mother-liquor is also dissolved, which might be avoided by the use of water-saturated ether. In separating the liquids closely, which has to be done several times, an elongated pear-shaped separatory, with a stop-cock at the small end and a cork at the large end, is very convenient, and these when used in pairs, drawing off from one to the other, give very rapid work and accurate results. It is necessary to evaporate off the ether from a beaker, because if a capsule be used the creeping over the edge involves serious loss, and the washing out of the extractive from the residue is impracticable. The alkaloids are left in the beaker in small varnish-like drops on the sides, and a varnish-like film at the bottom, but in half an hour or an hour of drying the drops generally become star-shaped crystals, and the film at the bottom also crystallizes; but these crystals when touched are found to be sticky, and no amount of drying that the alkaloid will stand is of any avail to dry them farther.

If there be any haste this assay can be easily made by one person in six or eight hours if the filter pump be used, and in a day and a night if the digestion of the moist powder be made, and the percolation be well managed without the pump.

The rationale of the assay process, as well as the process of manufacture, is very simple, and is based on the following conditions:

The alkaloid cocaine, when free, is very easily split up and destroyed by even a moderate degree of heat, and this destruction is materially aided by the presence of alkalies and other chemicals. It is also easily destroyed by heat, etc., when in its natural combination in the leaf, but less easily than when in the free state. But when made decidedly acid it is freely soluble in alcohol in the cold, and when in alcoholic solution, in this acid condition it bears the heat necessary to distill off the alcohol with but little if any destruction or damage.

The alkaloid is soluble in all proportions in stronger ether, while its sulphate and hydrochlorate are not soluble in ether. It can therefore be completely washed out of its ethereal solution by acidulated water, and can also be easily washed out of its watery solution by precipitation in the presence of ether. The solution of its salts in water can be completely precipitated by carbonate of sodium, without the liberation of carbonic acid, but a considerable proportion of the precipitated hydrate of the alkaloids is held in solution in the mother-waters, whether these contain either sulphate or chloride of sodium. But this portion of alkaloid can be completely washed out by ether.

The hydrated alkaloid cocaine, from the above process, is in light, white spongy fragments, or in light amorphous powder, very much like magnesia. It is not perfectly white, but very nearly so. It is nearly insoluble in water, but very soluble in acids, giving solutions that are not quite colorless. When a very small particle is laid upon the tongue, and the tongue then held against the roof of the mouth, a moderately bitter taste is perceived in a few seconds. In a few seconds more the bitterness gives place to a numbness and insensibility of the surfaces, as though scalded by hot liquid, except that there is no pain. This numbness increases for a few minutes, and then diminishes slowly, and disappears in ten to twenty minutes in proportion to the quantity applied.

The hydrochlorate of cocaine from the above process is an almost white crystalline powder, though the fragments of crystals are so small that it appears to be an amorphous powder, even under a glass of low power. The powder when dry is loose and mobile, but when exposed to damp air becomes a little damp and clammy, although it does not appear to be deliquescent. It is soluble in all proportions in hot water and in alcohol, and in somewhat less that half its weight of water at ordinary temperatures. Its solutions are not colorless, but appear to be nearly so when seen in small vials, even up to the strength of 20 p. c. Solutions of 50 or 60 p. c. strength are, however, even in small vials, of a greenish-yellow tint. The solutions are neutral to test paper. When tested with solution of chloride of barium they give, after a moment or two, the faintest cloud (limit of sulphates). With test-solution of oxalate of ammonium the result is negative (absence of lime). When the salt is burnt off a platinum surface, there is merely a trace of residue (limit of inorganic matter), and the spot moistened with water scarcely affects the color of neutral litmus paper (limit of inorganic alkalies). A test is very much needed to control the proportion of hygrine and other inert matter admissible, but as yet this has not been found. . . . .

The salt is put up in vials of 5, 10, 15, 20, 30 and 60 grains each, and the 4 p. c. solution in vials of 1, 2, 4 and 8 fluid drachms. The vials of the salt, when properly protected, can go through the mails, but the solution cannot, as liquids are absolutely excluded from the mails by law.

The demand for both the salt and the solution has been so very active, and the production so limited, that the prices have remained very high up to this time, and it is said that the scarcity of good coca, from which to make them, is likely to continue until the new crop is ready in May. Even moderately good coca is now held at 80c. to $1.25, while for some $1.50 is demanded, and it is about as scarce and high, and the quality about as poor in Europe as it is here, but that this condition can be maintained until May the writer doubts, since high prices for an article which is produced in such abundance, commonly brings it from unexpected and unusual resources. Merck, of Darmstadt, has until very lately been the principal maker. He has advanced his price three or four times, and has supplied a very small portion of what has been ordered from him, and he now announces that he can get but a limited supply of coca, and will be able to supply even less than before. At least five manufacturers in this country announce that they are making it in considerable quantities and are supplying all their orders. The price here and in England is about 50c. per grain for the hydrochlorate of cocaine, and $10 per fluid ounce for the 4 p. c. solution. . . . .

A new agent of such importance is very rarely so suddenly found, and it is not wonderful that it should produce much excitement, and be much abused, through the temporary enthusiasm in regard to its application, but it is to be hoped that this excitement will not last much longer, and that some of the failures and demerits, if there be any, will be heard of. It is certainly being very widely used, in very considerable quantities, all over this country, for all sorts of purposes, rational and irrational, and a most important experience with it must be rapidly accumulating. In illustration of how recklessly and empirically it has been applied, statements are published of its internal use in typhoid fever, diphtheria, scarlatina, and other diseases, and with alleged success, notwithstanding that all this ground of therapeutic uses internally has been gone over long ago with negative results. Locally for anæsthetic purposes it has been applied to the skin for the excision of tumors, and by hypodermic injection around parts to be incised, and generally with a published success that it is impossible to comprehend, except as results of enthusiasm. Many such published successful applications repeated in other hands have failed entirely, or almost entirely, whilst others, and these the more rational, have often failed of the complete success claimed for them.

There have been a very large number of papers in the journals upon its applications and their advantages, and many conservative writers have given their testimony and experience in regard to its importance without enthusiasm. Such papers are becoming more common of late, and they are doing much to abate the excitement and lessen the demand.

Since the writer's last note on this subject the original paper of Dr. Carl Koller, of Vienna, the discoverer of the anæsthetic effects of cocaine salts, has been published. It is a very important paper, and a translation of it may be found in the London *Lancet* for December 6, 1884, page 990. The paper was read at the meeting of the Vienna Royal Imperial Society of Physicians on October 17th, 1884. Its English title is "On the Use of Cocaine for Producing Anæsthesia on the Eye." "Translated and Revised by J. N. Bloom, B.A., M.D." This paper sets at rest several important points which should be noted. Dr. Koller says his first announcement of his discovery was to the Convention of German Occulists which met at Heidelberg on the 15th and 16th of September. . . . .

From the accounts of operators here, it would seem that two drops of a 5 p. c.

solution every five minutes, for half an hour, is wasteful, both of the agent and of time, unless the agent was defective in quality. Five drops of a 4 p. c. solution in two instillations, ten minutes apart, seems to be a sufficient quantity, and fifteen to twenty minutes a sufficient time. Some operators give the history of a much more copious use of the solution, and this suggests the probability of great waste. The greater or less lachrymation in different cases has doubtless an important bearing both upon the quantity required and the time, by the greater or less dilution and washing away of the agent.

In applying the solution to other mucous membranes than those of the eye, a camel's hair pencil has generally been used, but under the very best management, and upon surfaces made as dry as possible, the pencil leaves but a very small quantity upon the surface, and it is not to be expected that complete anæsthesia is easily attainable in this way, however frequent the applications, and a profuse use of the agent does no good, since it immediately runs off the surface. Neither is it of any use to apply it to surfaces coated with secretions, no matter how thin the coating, if they are of the glairy kind, since efficient contact with the surfaces is then impossible, and the waste is as complete as an application to the skin covered by epidermis. So, on its application to painful ulcers, burns, etc., care must always be taken to obtain contact of the solution by having the surfaces perfectly clean. A blistered surface, if covered with the natural exudation, is almost or quite beyond the reach of the solution, in proportion as the exudation is thin enough in consistence to mix with the solution when applied. The model condition for effective use is the mucous membrane of the eye, and upon any surface in that clean condition it will be as certainly effective. In applying it to denuded surfaces and to mucous membranes which will admit it, the best method is to have some light covering of the desired shape and size that will hold the solution. A thin filtering paper will be moistened over an area of fully a square inch by a single drop, or half a minim of the solution, and under favorable circumstances that will superficially benumb an equal area of mucous membrane. Any one can convince himself of this fact by placing such a piece of paper on his tongue, if the organ be rinsed off clean before the paper is laid on. Such a paper when touched occasionally with a camel's hair pencil charged with solution will have its efficiency strengthened, and upon the tongue, for example, any effect possible to the agent is obtainable in that way. But paper is not a convenient tissue for such application. Fine thin cotton or linen fabric is much better, and nothing can be better than well-worn fine handkerchief material. This is sufficiently absorbent to hold the dose, and thin enough to avoid waste, and to be closely applicable to irregular surfaces. When touched in situ, for resupply, the brush should be applied to the upper edge of the tissue, so as to run down through it before draining off, and the smallest possible quantity should be applied at a time if waste by running off be avoided. Much solution is wasted by the use of camel's hair pencils many sizes too large. Indeed, it is hardly possible to get a brush too small to convey this solution economically, unless large surfaces are to be coated. In the use of a brush for applying the solution it should never be dipped into the vial of solution, because it carries back secretions and excretions, which rapidly spoil the remaining solution, and it is thus wasted. The proper way is to drop out the quantity to be used on the bottom of a tumbler or wineglass, and dip the brush in this until it is all used, never putting any back into the vial. In this way any desired quantity may be used and none be spoiled or wasted.

If any one will try the effect of a single drop of 4 p. c. solution put directly upon his tongue without rinsing, and then, half an hour later, rinse the tongue clean and apply the same quantity upon a piece of thin bibulous paper half an inch in diameter, he will be convinced that many failures are due to faulty application, and may see that one drop well applied may be as effective as the nature of the agent will admit of, and quite as effective as ten drops badly applied. From reading the published accounts of the application of the solution, it seems highly probable that more of it is wasted than is really utilized, and if this waste could be stopped without increasing the number of failures, the price of the chemical would soon come down.

Little has been writen upon the mode of action of cocaine salts as local anæsthetics; or, rather, the writer has seen no attempt to explain how coca in substance should be a nervous stimulant, and yet its alkaloid be a most powerful nervous sedative. The two effects cannot possibly be antagonistic, for that is irrational; neither can the effects be due to quantity. Some other rational explanation will doubtless be reached, and the writer offers the hypothesis that the local effect may be measurably a mechanical one, and thus be independent of the effects when it is taken internally. Any agent that would contract the supply vessels of the terminal bulbs of the sensitive nerves, and press out the blood from them, would to the same extent lessen the sensibility of the part; and if the capillaries were emptied entirely by such contraction, sensation would be abolished as completely as the galvanic current is abolished when the liquid is drawn off from the plates. The application of cold abolishes sensation in this way, and is a local anæsthetic of the same character as cocaine salts, and the benumbing is of the same kind in its observable degrees. Heat also has a similar action when just short of that degree which coagulates the albumen of the bulbs and the circulating fluids. Carbolic acid is also a very effective local anæsthetic by something of the same kind of action, of contracting the capillary vessels, and thus diminishing the supply of the excitant fluid necessary to the function of sensation. But all these agents, when their action is carried to the degree of complete anæsthesia, are proportionately destructive of tissue, and either kill the parts or cause destructive inflammation. All cause blanching of the tissues by pressing out the coloring liquid, namely, the red blood; and tissues when thoroughly benumbed by cold or heat or carbolic acid are found comparatively bloodless when incised. An injury to a very cold hand or foot is not painful, neither does it bleed much, but, as it is warmed, the bleeding and pain come on together. It has been noticed by several observers that red mucous membranes, when anæsthetized by salts of cocaine, are white, and when cut into superficially —that is when the cut is not deeper that the anæsthesia—there is but little bleeding. This, if true, is precisely the condition in anæsthesia by cold, and the condition in both cases may be due to the same cause, namely, contraction of capillaries, whereby the circulation is diminished or practically suspended. Then, if the effect of cold in producing anæsthesia be a mechanical effect, the similar effect of cocaine, if produced in a similar way, is probably also mechanical. This, in a profound sense, is of course no explanation at all, since it does not touch the reason why cocaine should, or does contract the capillary vessels, and thus deprive the function of sensation of its exciting cause and necessary condition, but yet such explanation goes far enough to show how the same agent may rationally be a nervous stimulant when given internally, and yet be a powerful nervous sedative when locally applied. Indeed, the explanation given of the mode of action is supported by the observations of the early investigators of the physiological effects when internally administered, since they showed that one prominent effect was to contract the peripheral arteries.

If the explanation be true, there is no difficulty in comprehending why the local anæsthesia is a condition of degrees, and can hardly be complete in tissues supplied with vessels of considerable size, and that the anæsthesia of tissues below the surface must depend for degrees upon the rate and amount of absorption of the agent, since it cannot be conveyed from the surface to the deeper parts by vessels which are closed or contracted by it so as to abolish or reduce their carrying capacity.

The explanation also serves to show why it is without effect when applied to the skin, since the epidermis there prevents mechanical contact with the capillaries. But if the skin was well soaked with water, so as to soften the epidermis and bring it into a condition similar to that of the epithelium, then the agent should at least have some effect. Or, in combination with, or solution in some such liquid as oleic acid, which can get through the epidermis, or be absorbed, it should be somewhat effective.

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## HOSPITAL NOTES.

Mr. Lawson Tait's Operations at the Albany Hospitals.—The *Albany Medical Annals* for January, 1885, gives a report of the clinical lectures delivered at St. Peter's Hospital and the Albany Hospital, and also of the results of the operations he performed at them. The case operated at St. Peter's Hospital was as follows:

The patient was 31 years of age, unmarried, and enjoyed good health until she reached her seventeenth year, when she was sent to Bellevue Hospital, New York, on account of an attack of pneumonia. She remained in the hospital three months. After leaving the hospital, the menstruation was irregular and profuse. She was able to do housework, and did not seek medical advice until about eight years afterwards, when she again was admitted to Bellevue Hospital. At this time frequent hæmorrhages from the vagina had prostrated her. In the winter of 1881 the patient was in the Albany Hospital, and the principal symptoms at the time of admission were severe abdominal pain and hæmorrhage.

Examination showed that she had a large bi-lobed tumor, the parts of which were of unequal size. The larger mass was a cystic ovary, and the smaller mass on the left a myoma of the uterus.

Mr. Tait said he had no hesitation in operating upon this case, although he had some doubts as to the propriety of conducting such operations in a crowded room. He had never before operated in the presence of more than a dozen persons, and if the patient were to do poorly, he would be inclined to lay it to the atmosphere in which the operation was performed. Mr. Tait here began the operation at 4.42 P.M., assisted by Drs. Van der Veer and Boyd. After opening the abdominal cavity, he announced that the case was one of solid ovarian tumor and of uterine myoma, and proceeded to remove both, with the entire uterus. The operation was finished at 5.24 P.M., making the time from the first incision to the conclusion of stitching up the wound forty-two minutes. The pedicle was treated by Tait's circular wire clamp. The wound was dressed with simple pads made of absorbent cotton covered with carbolized gauze. Two of these were placed over the wound and held in place by a cotton bandage passed around the patient's waist.

After the operation the patient's condition was favorable until about 10 P.M., when there was a severe hæmorrhage from the vagina, apparently. About this time a catheter was introduced, and the urine drawn from the bladder was found mixed with blood. Through the prompt and efficient measures adopted by the house physicians, Drs. Flynn and Melick, the patient rallied, although when they began the use of the hypodermic injections the patient's pulse was imperceptible, and the respirations about 42. At 4.30 A.M. on the following day, September 11, 1884, the patient desired to empty the bladder; a catheter was introduced, but no urine was found.

At 10. A.M., September 11, 1884, the patient was seen by Mr. Tait and Dr. Boyd. After reading the house physicians' report, Mr. Tait concluded that a portion of the bladder had been constricted by the clamp. A careful examination of the pedicle and abdominal wound revealed a satisfactory condition of affairs. Examination of the vulva revealed the fact that blood was slowly flowing from the urethra, and a catheter passed into the bladder came in contact with clots. Mr. Tait remarked that the patient's recovery would be retarded by the accident, as a fistula of the bladder would result, but that even with this complication she would recover. He said that the accident had occurred in two of his operations in England. The bladder was washed out twice a day with a weak solution of carbolic acid, and a soft catheter allowed to remain in the urethra. After a few days a solution of boracic acid was substituted for the carbolic acid.

On the fourth day after the operation a bloody fluid was noticed oozing near the pedicle, of a decided ammoniacal odor. There was no evidence of tympanites at any time. The stitches were removed on the sixth and seventh days after the operation, and the wound was found to be perfectly healed as far as the clamp. The only dressing used was that of absorbent cotton and carbolized gauze. The clamp was removed on the eleventh day. Long before this time the urine flowed freely through the opening in the abdominal wall. As the remnants of the pedicle were removed a large funnel-shaped cavity came into view, at the bottom of which was the fistula. The temperature reached 102° F. on the day after the operation; also on the third, fourth and fifth days. On the fourteenth day 103° F. was reached; this was the highest temperature recorded. The pulse was above 100 for the seven days succeeding the operation.

On the 30th of November, 1884, the fistula was entirely healed, and the patient had perfect control of the bladder. Examination of the abdomen revealed a firm cicatrix extending from near the umbilicus to the symphysis pubis, and no trace of the fistula could be discovered.

The case operated on at the Albany Hospital was as follows:

The patient was thirty-three years of age, and had been subject to fits for upwards of nineteen years. Up to the time of puberty she was a healthy girl, but during the past twelve years her general health had been very bad. The fits in this case were clearly hysterical in character, and not epileptic. The history showed that they always came on before a menstrual period, and that the periods were fairly regular, the flow being rather under than over the usual quantity. The chief symptom in the case was the intense pain which the patient experienced previous to the period, and which was relieved when the flow was established. Pelvic examination showed that the uterus was infantile and anteflexed, as is usual in such cases. The left ovary could be felt, while the right was enlarged and probably cystic. The case, he said, was without doubt one such as is frequently met in England, where the patient's life from the beginning to the end of menstruation is one long agony. The woman consented readily to an operation when its nature had been explained to her, and nothing, he thought, should prevent a surgeon from giving relief by the knife in such a case. In her condition at that time she was fully as sterile as she would be when the ovaries were removed, so that this objection could have no force.

The patient was then etherized and the operation begun. An incision two and one-half inches in length was made in the abdomen, just above the symphysis, in the median line, and the ovaries removed. The right ovary was found to have undergone cystic degeneration, while the left was small and shriveled. To the left ovary Mr. Tait attributed the patient's trouble. The fallopian tubes were not diseased. The operation closed with the dressing of the incision at 11.55 A.M., having occupied about ten minutes.

After the operation the patient's condition continued favorable until the end of the second day, when the abdomen was so greatly distended as to cause annoyance. Enemata were ordered, and in course of a few hours the bowels moved freely, and great relief was experienced. On the sixth day all the stitches but one were removed, and as they were pulled out a small quantity of pus followed. A large abscess was found in the line of the incision, and retarded the patient's recovery considerably. The abscess was treated with the "red wash," recommended by Mr. Tait, and zinc ointment. The temperature was 101 on the fifth day; on the other days during the first week it varied from 99 to 100. The pulse was variable. At the end of a month the patient was able to walk around, and the wound soon after was completely healed. During the time that the patient was confined to the bed there were no attacks which could be compared with those of epilepsy. The patient was very hysterical; otherwise, nothing unusual was noticed about her. About six weeks after the operation the house physician reported that she had a convulsion, followed by complete loss of consciousness. This was the only one that occurred during her stay at the hospital.

Circular Wards.—The Miller Memorial Hospital at Greenwich, which was opened by the Lord Mayor of London recently, is of very special interest to hospital committees, because it is the first hospital with circular wards which has been completed in this country. Part of the large hospital at Antwerp is said to be ready for use, but it has not yet been opened. It is interesting to note that the probable advantages of the circular form of ward had been thought out by at least three independent persons. To Professor John Marshall belongs the credit of having independently thought out the scheme, and of having brought it prominently before architects in this country; and to the influence of his teachings may be traced the design not only of the Miller Memorial Hospital, but of the circular wards at the Hampstead Infirmary and at Burnley. Before the publication of Professor Marshall's pamphlet the plans for the hospital at Antwerp had already been drawn and accepted. Long before this the idea had occurred to a third person, and Major-General Sir Andrew Clarke had made designs for a hospital in Madras on the circular system in 1852; he also designed a hospital on this principle for Yokohama, but neither of these were built; he also designed a small hospital for Lucknow, but it is not known whether this was ever built. At the present time, however, he has under construction two military hospitals; one, a small cavalry hospital at Seaforth, near Liverpool; and the other, a small hospital at Milton, near Southend, for the School of Musketry; a third much larger hospital, to contain a hundred beds, is about to be erected at Valetta, in Malta. The fact that this special system of construction should have suggested itself, quite independently, to no fewer than three persons, is in itself strong evidence that the plan possesses certain conspicuous advantages; anybody who will pay a visit to the hospital at Greenwich will be convinced that many of the objections urged against the system are not borne out by experience. The wards, which each contain ten beds, have a diameter of thirty-five feet, are twelve feet high, and have a cubic space of one hundred and twelve feet for each bed; in the centre is a three-sided shaft, with a small fire-place on each side, and also air-shafts for ventilation. The general aspect of the wards is very bright and cheerful, and the central column is found not to offer any serious obstruction to the general view. The cost has been under £160 a bed; when the whole design is completed by the erection of two more circular wards, the cost will be reduced to £140 a bed for the whole hospital.—*British Medical Journal.*

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Phylloxera.—A physician in the department of Maine et Loire is said to have at length discovered a means of overcoming the phylloxera by an easy and inexpensive treatment, the basis of which is an arsenical solution mixed with cinders. The limited experiments made with this preparation seem to have been attended with good results.—*Lancet.*

# PROCEEDINGS OF SOCIETIES.

[NOTE.—The weekly medical journals very properly publish the proceedings of societies as soon as the societies adjourn. This journal being a monthly cannot, of course, do this ; it will publish, therefore, only such carefully obtained proceedings of American and European societies as are most interesting and instructive.—ED.]

## CINCINNATI ACADEMY OF MEDICINE. Meeting of January 19, 1885.

Dr. E. S. McKee read the report of a case of

### REPEATED ABORTIONS SUCCESSFULLY TREATED WITH POTASSIUM CHLORATE.

The following case has been under my care for two and a half years, and in its management Dr. Palmer has a number of times seen the case with me :

In 1882 Mrs. C. presented herself for treatment at the dispensary of the Medical College of Ohio, with the following history : Aet. 34, American, married at 15, lived with her husband two years, and had two miscarriages ; remained a widow one year, remarried, and miscarried eight times. These ten miscarriages occurred during the fifth, sixth, seventh and eighth months of utero-gestation, one only, the last, being later than the seventh month. Some of these occurred as frequent as two in the same twelvemonth. On examination she was found pregnant. Her present husband had always enjoyed excellent health, and her first, she said, was likewise healthy. Her own health had been fair. No history of syphilis could be obtained, nor did physical examination show any evidence of this disease, no malformation of the uterus, chronic metritis or other local diseases explaining the frequent miscarriages were found. On further questioning she said, to use her own language : "The doctor who attended her about eight years ago said the afterbirth was nothing but a chunk of fat, and took it home with him."

Presuming the cause of the trouble to be fatty degeneration of the placenta, she was put on chlorate of potassium, fifteen grains three times a day. This remedy was continued with but few intermissions, and an occasional laxative pill to keep the bowels open until gestation was completed. A healthy boy was born. He promised to do well, but succumbed on the ninth day to an overdose of an opiate.

July 10, 1884, she appeared again, about three months pregnant. On the advice of Dr. Palmer she was for the second time placed upon the chlorate of potassium. She took the remedy in fifteen-grain doses three times a day, and, for a time, took as high as thirty grains, morning, noon and night.

August 18, the fœtal heart was plainly heard. The chlorate of potash was given constantly with tinct. ferri chloridi, except when such remedies as tinct. nux vomica or bismuth were demanded on account of stomach disturbances incident upon the pregnancy. At various intervals the fœtal heart was noted to be beating nicely, and on November 25 a healthy boy was born at term, who still lives.

In the last delivery, which was late at night, the messenger failed to get me, and returned to find the baby born. Before my arrival the placenta had been made away with. But for that unfortunate incident the placenta would have been carefully examined.

It is not my purpose to enter into the broad field of abortion in its medical, moral and legal senses, but, as far as can be, only where it is connected with this case.

As to the terms abortion, miscarriage and premature labor, there is much conflict of authority. Some say it is abortion before viability, and premature labor after that date; others, abortion when occurring during the first three months; miscarriage during the fourth, fifth, sixth and seventh months, then premature labor; still another speaks of abortion prior to the twentieth day as ovular; fœtal from this date to the sixth month. The ancients called early abortion effluxio. These are needless and confusing divisions, and lead to no practical result. It is best to speak of abortion prior to viability, then premature labor. Miscarriage is a term that will cover all, is less ambiguous, and by the laity very much better understood.

Ninety per cent. of child-bearing women abort once or oftener, and about one pregnancy in seven terminates abortively.

The etiology is an interesting field, and one capable of much greater cultivation. As a guide to prophylaxis, a clear knowledge of the causes is very necessary. Important as is this subject, it would be beyond the scope of this paper to enter fully into the etiology. There may be maternal, fœtal or possibly paternal.

Habitual miscarriage is a term severely criticised by some authors, yet there seems to be grounds for the belief of the habit being present in some women. Edis (*British Med. Journal*, 1875, ii. 65) calls it "an assertion of ignorance. We might as well say she aborts because she aborts." This and the statement that a woman is laboring under an abortive diathesis, he says, are "ignorant dogmas, and it is useless to sit down disarmed and passive under their protection." It has, nevertheless, been the experience of every one largely engaged in obstetric practice that some women are unable to carry their offspring to full time. They again and again bring forth stillborn children. One abortion paves the way for another. Repeated abortion, it is said, weakens the uterus.

Burns mentions Schulzius as reporting a case where a women aborted twenty-three times at the third month.

Dr. Young, of Edinburgh, reports thirteen abortions, the fourteenth going to term.

Tyler Smith* reports six successive abortions, with albuminuria.

Protheroe Smith reports a woman who, in thirteen years of married life, had six abortions and three children at term.

Leishmann says there are rare instances where we can only account for the repeated abortion by supposing that the uterus has contracted an inveterate habit. A woman who has aborted is much more liable to a repetition than one who has never aborted. There is certainly here evidence pointing towards the existence of a habit, though it is possible that this may be explained away by the presence, in each case, of some cause undiscovered.

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* Trans. London Obstetrical Society, 1, 1859, 108.

Sir James Simpson first used and recommended chlorate of potash in cases where repeated miscarriages had taken place from fatty degeneration of the placenta. He used it on the theory that an abundance of oxygen was supplied to the fetus through the placental tufts. In a discussion before the Edinburgh Medical Society in 1869, in which Sir James Simpson, Dr. Cuthbert and others took part, he said he gave it on account of disease of the placenta, but he believed also that it was a means of arterializing the blood. He was led to the use of the chlorate in such cases by the experiments of Davy and Stephens, who pointed out that an alkaline salt when brought into contact with the blood gave it an arterial appearance.

Dr. O'Shaughnessy* and others have found by experiment that it gives a bright scarlet color to the venous blood, and passes undecomposed into the urine. This he found by injecting the remedy into the veins of animals. Dr. Isambert,† however, denies the statements of O'Shaughnessy. He says the chlorate does not part with its oxygen at the temperature of the body, and, as it is eliminated from the kidneys unchanged, he says it has not the specific action claimed for it. Granted that the observations were correct, they in no wise warrant the deduction, since partial mechanical asphyxia will produce the same result, as will also other alkaline carbonates. As to the real action of chlorate of potash in the system, we have no very detailed knowledge, but the salt is about equal to the nitrate of the same base. It certainly increases at times the flow of the urine, and is eliminated very largely from the kidneys. Viewed from a chemical standpoint, it is improbable that the salt parts with any great per cent. of its oxygen at the normal body heat. It is not only found present in the urine, but also in the bile, saliva, milk, tears, perspiration and nasal mucous membrane.

Isambert‡ used it on himself for several days in increasing doses of from eight to twenty grammes. He noticed a greenish color of the stools and an increased flow of the urine, with a feeling of oppression and pain over the kidneys. Ten days after it was taken he could find it in the urine. The elimination continued twenty-four or forty-eight hours.

It should never be triturated with sulphur, sugar, tannin or other readily oxidizable substances, except in the presence of water. Disregarding this precaution has caused many serious explosions. It is easily seen how a distinctly alkaline fluid, as the blood, having a loosely combined alkali present, would lead to the gradual oxidization of the organic constituents of that fluid.

The oxygenation of the blood produced by chlorate of potassium was very ingeniously applied by Dr. Fountain.§ He employed it quite successfully in cyanosis from heart and lung troubles. This investigator died from taking an ounce at a dose, experimentally.

Bruce ‖ used chlorate of potassium in six cases where repeated abortion had occurred. In all but one of these the children came to term. In this one he brought the child to the eighth month, instead of the fifth, the usual time at which the abortions occurred. The child's abdomen was found much enlarged from ascites, and probably would not have lived anyhow. He gave the remedy to the amount of ʒi. daily. In one case he increased it to ʒii. daily on account of weakening of the fetal heart.

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* U. S. Dispensatory, "Chlorate Potash."

† *Loc. cit.*

‡ Etudes Cliniques, physiol. et cliniques sur l'emploi therap. de chlor. de potasse. Paris, 1856.

§ *N. Y. Journal of Medicine*, 1859, p. 1.

‖ Trans. Obstetrical Society of Edinburg, Nov. 15, 1865. p. 670

Dr. Inglis[*] said he never had seen potassium chlorate fail. In one case, after sixteen stillborn children, the seventeenth was born alive under this remedy.

Dr. Cairn[†] reported a case of a woman who had aborted five times. Potassium chlorate carried the sixth child to the sixth month.

Dr. Keiller[†] thought it a matter of difficulty to prove that the mother's blood was really oxidized by the chlorate of potassium to the extent of acting on the placental structures or their fluids. He thought the result might come from the tonic power of the salt, or the wonderfully tonic power of hope against the depressing influence of dread. He had given it to one women who had lost seven children; she was now in the eighth month and doing well. Had given the chlorate of potassium to the extent of several drachms per day largely diluted. The patient used it as a common drink.

Dr. Balfour[†] said chlorate of potassium does not act as usually supposed, by parting with its oxygen, for it was eliminated unchanged. He thought it altered the constituents of the blood so as to enable it to take up more oxygen as seawater suspends more oxygen than common water.

Dr. John W. Tradi, of Sedalia, Mo., reports a case of "Threatened Abortion Successfully treated by Chlorate of Potash."[‡] His patient had been married six or eight years and miscarried each year at about the sixth month. He gave 2½ grains every three hours. The patient was in the worst possible condition, and was obliged to remain in bed the whole period of utero-gestation.

No less an authority than Karl Braun, in his recent work, speaks favorably of the use of potassium chlorate in miscarriage.

## DISCUSSION.

Dr. Palmer remarked that Dr. McKee had given the salient features of this case, which to him possessed more than usual interest. Not that the case is a unique one by any means, but its points were so clearly and pointedly defined and pronounced as to make it worthy of a record.

Here was a poor woman, twice married, pregnant by both husbands, who had miscarried some ten times consecutively in from the fifth to eighth months, inclusive, of utero-gestation. She applies to know whether anything can be done to prevent further miscarrying; if it is possible for her to have a living child. She thinks herself pregnant some four or five months. An examination proves that she is pregnant. It is her eleventh pregnancy. She is placed upon a certain remedy or plan of treatment, and in due time has a healthy-looking living child born to her at time.

Again she becomes pregnant, for the twelfth time. The same treatment is again followed up, until the completion of utero-gestation, and at term she is delivered of a healthy living child.

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[*] Trans. Obstetrical Society of Edinburg, Nov. 15, 1865, p. 670.

[†] *Loc. cit.*

[‡] *Boston Med. and Surg. Journal*, 1869, vol. 81, p. 287.

Are these results a *propter hoc*, or a *post hoc?* Can they fairly be attributed to the employment of the remedy?

Absolute positive proof is wanting; but the evidence of the relationship of the use of the remedy to the results is as presumptive, probable, or circumstantial, as it is ordinarily ever attainable in medicine.

When this woman presented herself, the first thing to determine was, Is she pregnant. That established, the next was, to fix, if possible, the cause of the miscarriages. As Dr. McKee has well said, a local exploration failed to detect any adequate local cause. The uterus was not dislocated or flexed. There did not appear to have been any metritic or parametritic inflammation. Nor could any constitutional disease be found. The general health was fair for one in poor circumstances and not very good hygienic surroundings. She denied ever having had any cutaneous eruption, or buccal or pharyngeal ulcerations, and no lymphatic enlargements anywhere could be detected. There was no syphilis in her. Nor was it hardly possible for the ovum or ova to have been syphilitic from the father, for she had been impregnated by two husbands at different times, and miscarried in each.

By exclusion, we were limited to accept the opinion that the real cause for her loss of children resided in some defect of the placentæ. What was this?

Of the various placental diseases —congestion, apoplectic extravasations, placentitis (?) and the various forms of degeneration : calcareous, cartilaginous, carneous and fatty degeneration—the last named is one of the most common. It certainly is the most common of all the different degenerations. It may result from the congestive or inflammatory states or extravasations, and is a process not unlike what is found elsewhere in the body. Not unfrequently it appears to be a physiological condition in the placentæ.

Many placentæ at term have some fatty degeneration. Attached as is the placenta to the uterine wall, and with some fatty degeneration going on in that wall in almost or all cases, in a limited way, in ripe uteri, about term, it seems easy to understand how that organ can be similarly involved. This process is a normal one, and is only an anticipation of a condition rapidly and decidedly to follow so soon as parturition is over. But this physiological state may be anticipated too far back in utero-gestation—how far we cannot state or know save by effects—and the normal be made a seriously abnormal condition.

As the function of the placenta is that of nutrition and respiration for the ovum, anything which changes the anatomical character of its tissue may impair both the nutrition and oxygenation of the child in utero. The fetus may die either from placental marasmus or placental apnœa.

Now, it is very probable that fatty degeneration was the real morbid condition of the placenta of this patient whose case we are now considering.

As has been stated, Sir James Y. Simpson was first led to the use of the chlorate of potassium by the experiments of Davy and Stephens, in causing blood to look brighter and arterialized by contact with alkaline solutions.

The chlorate was supposed to possess oxygen gas to a remarkable degree; hence its selection over other alkaline preparations. At any rate, Simpson used and obtained good results by the administration of the chlorate to patients, who previously had had dead children in consequence of a seeming diseased condition of the placenta. His example has been followed by others in different parts of the world, and strong testimony of its utility has been offered by Leishman, Barnes, Carl Braun, Lusk and Fordyce Barker.

The speaker had also had some very favorable experience with it, but in no instance more marked or decided, and more clearly established, than in this case. Whatever its mode of action, whether it acts as a tonic, or is decomposed in the blood and directly thereby furnishes an increased quantity of oxygen to the fetus through the placental tufts, or whether it puts the blood in such a state that it can carry an increased quantity of oxygen, such is unsettled, and a matter of speculation.

Nevertheless, the clinical fact, outside of the modus operandi, stands. It is a remedy the use of which the speaker thought was not sufficiently known in this class of cases, or, if known, not properly appropriated.

Now, the bromide of potassium he could conceive of being useful in some cases of abortion or miscarriage, where there was much local uterine irritation, and especially reflex disorder; and the iodide of potassium was especially advantageous in syphilis of the ovum, or syphilis of the urethra?

So the chlorate had its special field, as the clinical history of this case well established.

Dr. McKee, in conclusion, said that the patient's hygienic surroundings had not varied. He had made a careful digital and specular examination only this afternoon and found the parts in a remarkably healthy condition. Did the abortions occur from uterine disease, subinvolutions, for instance, would they not occur at shorter intervals? The "overdose of opiate" consisted of paregoric, which was prescribed by another physician, one who knows quite well what he is about. The nurse gave an enormous quantity. The child died. A post-mortem was demanded, obtained, and the child found full of the medicine. Prosecution was threatened, but no arrests followed.—*Cincinnati Lancet and Clinic.*

Medical Society of the County of Kings, N. Y. Meeting of January 20, 1885; the President, Dr. J. A. McCorkle, in the chair.

Dr. J. N. Freeman read a paper on

### ELECTROLYSIS AS A CURE FOR UTERINE FIBROIDS.

Dr. A. J. C. Skene thought that the paper was one of interest. Anything that promised to be of value in the management of fibroids was worthy of all attention, because such tumors were common, and some of them that he had met with had been difficult to manage. At the same time he might say that, of all the neoplasms of the sexual organs, the fibroid was one of the most harmless to life. With regard to the method of treatment advocated in the paper, he begged leave to differ from the statements made by the author, and he could, perhaps, show why he did so. First, the method was not a new one, as would be seen presently. Referring back to the use of electrolysis in the management of cysts of the ovary—say about fourteen to sixteen years ago—Dr. Semeleder reported twenty cases of ovarian cysts treated by electrolysis, the majority of which were cured or improved. He came to New York, and was invited to practice electrolysis in the Woman's Hospital, and he there met with failure. Dr. Skene did not remember any of his cases that were cured. One patient died, he believed, and the success of the electrolysis in that direction was not satisfactory. About the same time Dr. Ephraim Cutter, of Cambridge, Mass., reported fifty cases treated by electrolysis—the majority cured or improved. These fifty cases were published in the *American Journal of Obstetrics*, edited by Dr. Mundé. Now, that Dr. Mundé should tell Dr. Freeman that he had never heard of the successful treatment of fibroids by electrolysis was peculiar. One thing was certain, either he had forgotten, or he did not read his own journal. At the time these cases were reported Dr. Thomas visited Dr. Cutter, saw him treat a number of cases, came back to New York with the apparatus and full directions as given by Dr. Cutter, and began a series of observations in his own practice, chiefly in the Woman's Hospital, the speaker thought, but without much success. He failed to get the results that Cutter did. Scattered through the literature of gynæcology about that time there were many occasional cases reported. The speaker also caught the idea, and made a few observations about the same time. Two of them were recorded in the history of the College Hospital. He thought, upon consideration, that three of them would be found on the records there. Two of them were most excellent cases for this kind of treatment. The tumors were interstitial, and extended down into the cervix and low down into the vagina, so that he could practice electrolysis with the greatest facility, and without the necessity of employing an anæsthetic. In the first applications in each case he employed ether; after that, as he found it was not specially required, he did not employ it. So long as he stuck to electrolysis, the tumors were not modified. When he pushed it beyond the mere decomposition of the fluids in the tumors and got the electro-cautery effect, suppuration and diminution of the tumor were produced. In both cases the tumors became softer, but did not diminish in size especially. In another case, a hospital one, he practiced electrolysis by passing needles through the abdominal walls. The tumor extended above the umbilicus. He repeated the treatment at least seven times in all, and he thought, by stretching his imagination a little, that the tumor was reduced one-sixth in two years. The tumor did not threaten the patient's life or render her useless, and she declined further treatment. Another case occurred in his private practice, with similar results; so that his own observations would not appear to favor the use of electrolysis. He had seen other cases treated by other gentlemen with somewhat similar results. He might go back, if not out of order, and refer again to electrolysis in the treatment of ovarian cysts. About the same time that Semeleder's cases were reported, Dr. Skene was invited by Dr. Hesse to see a case of cyst in the abdomen in his practice. There was no doubt about the diagnosis, so far as regarded the presence of the cyst. Dr. Hesse practiced electrolysis, and entirely removed it. This case was published in the *American Journal of Obstetrics* in 1877. From the history of it, and the general appearance and physical signs, he was inclined to think it was a cyst of the broad ligament. After the treatment by electrolysis, and the complete cure, he was even more convinced of that. About the same time he had a patient with a very large ovarian monocyst. She absolutely refused to be operated on. She was then told of this new method, which she accepted. She was warned that it might be dangerous; that he knew but little about it. She accepted his little experience. He therefore practiced electrolysis, with the result of getting up an inflammation of the ovarian cyst, which extended to the peritoneum, and the patient died at the end of a week.

Such was his own personal experience in the use of electrolysis. He was inclined to think that this was the experience of many others also, because there was a great deal of enthusiasm on this subject a few years ago. Many tried it, but he had heard nothing about it of late years. Had the gentleman who practiced this treatment of fibroids met with the promised success, they would have continued in well-doing, and the profession would, no doubt, have heard of their good deeds. In place of this, there had been a marked silence on the subject till now. Then, again, it was exceedingly difficult to estimate the benefit derived from any form of treatment of fibroids. He noticed that sereral of Dr. Freeman's patients were in the neighborhood of forty years of age. Now, it was a notorious fact that fibroids about that time often disappeared without treatment of any kind; and often even earlier than that they appeared to be arrested in their growth. There were so many natural means of cure, that in estimating the benefit of treatment we must remember that nature sometimes accomplished that which art could not do. If the patient lived until the menopause or final involution of the uterus took place, the fibroid would disappear also.

Again, a little inflammatory action in the mass itself, or in the uterus, might cut off the circulation and the tumor would disappear. There were, indeed, many ways in which these tumors became arrested in their growth, so that great care must be taken in estimating the benefit of any method of treatment. While he fully appreciated these histories as given by Dr. Freeman, it must be remembered that three swallows did not make a full meal, neither did three cases fully prove the value of this treatment. A number of cases were necessary in order to pass upon its value. We therefore had to accept these cases as evidence that this mode of treatment was still under observation. It might be successful in the future, but was at present only on trial.

One thing he ought to say in regard to this mode of treatment—it was not so dangerous as he supposed it would be. He remembered that, when he first passed those needles through the abdominal walls and drove them into the hard mass, he was very much afraid of the consequences. He supposed he was the most unhappy man in Brooklyn one day when the patient, after coming out from the ether, had a terrific chill. He imagined it was the beginning of the dreaded peritonitis, but it was only a nervous chill—the temperature did not go up. After that the patient came to the hospital, say to-day, was treated to-morrow, and then the next day went home about her business. Cutter's instruments were larger than needles. They looked like little daggers; had handles and V-shaped heads. He used to take them by the handles and thrust them into the tumor with great force, and yet only one of the fifty patients died.

Very few of them had any peritoneal trouble. That was very much in favor of the method, and deserved particular attention.

Now, when we come to compare electrolysis with ergot and laparotomy in the management of these cases, it could only be maintained that it was one of the means of treating fibroids, and one that was not effectual in all cases. That we did have most excellent results from ergot we all know. When the tumor was intra-uterine, surrounded by strong muscular walls, it would respond to ergot. If the uterus would respond to ergot, we should accomplish one of two things—either the mass would be entirely expelled, or could be removed by traction and enucleation, or else, by the circulation being cut off, it would become atrophied. When the tumors were interstitial, ergot acted less effectually; when they were subperitoneal, little if anything could be done, and the result was not by any means satisfactory. These were the cases where we had to resort to laparotomy. When we remembered how many of these cases there were, and how many patients got along comfortably for years, the tumor being stationary, and how many of them got well without treatment, the field for the use of electrolysis was limited as compared with other means.

Dr. Freeman replied that Dr. Mundé had mentioned Cutter's cases, but had said they were not satisfactory. Dr. Cutter's operation was essentially different from the author's. Dr. Skene had accurately described his method—with a V-shaped dagger—and he generally produced suppuration. This Dr. Freeman had tried to avoid. Dr. Cutter's cases had not been published, and Dr. Freeman had not heard of them when he made his first experiments, and only learned the results when they were published the next year.

Dr. Freeman had treated two of his cases in St. John's Hospital, and had succeeded in preventing suppuration in every case except after one treatment, and in that it was limited to the abdominal wall and did not affect the tumor itself nor the peritoneum. In all these cases there was a gradual softening and absorption of the substance of the tumors.

Dr. Skene said that Dr. Freeman must have misunderstood his remarks. There was no essential difference in the methods practiced by Dr. Cutter, Dr. Freeman and himself.—*New York Medical Journal.*

## SANITARY DEPARTMENT.

House Drainage in London.—A good deal of stir, says the *Sanitary Engineer*, seems to have been made recently by a letter in the London *Times* describing the drainage of a residence in the fashionable quarter of South Kensington. The writer of the letter had received a certificate from a "sanitary institution" that the state of the drainage was good, but it some time afterward had to be examined, and then was found very bad. The water-test showing something wrong, the drain was dug down to in the cellar, and two lengths of drain pipe were found which did not meet by a foot. The whole drain was badly jointed, with a little mortar on the tops only of the joints, and, having been laid in soft ground, had settled, drawing the pipes apart in places at the under sides of the joints. The ground was saturated with the leakage. The case is a pretty bad one, but no worse than what were found in New York ten years ago, and probably no worse than a good many in London now. Doubtless, if the Plumbers' Company could secure a system of inspection of new work like that in this city, and which was much talked about at the Plumbers' Congress, the number of such cases would be diminished.

THE UNHEALTHFULNESS OF LARGE APARTMENT-HOUSES.—Dr. E. G. Loring, of Madison avenue, New York, who lives opposite an enormous apartment-house, is reported as saying in a recent interview: "When I first took this house, that corner was occupied by a row of ordinary brown-stone houses, one of which still remains. As you can see, the apartment-house is more than double the height of the old houses, the last remaining of which now looks like a little child by the side of the Chinese Giant. Before that place was built I had the sun shining into my reception-room from 9 in the morning until 12 or even 1 o'clock. Now my reception-room gets no sunlight at all, while this room in which we are, and which is directly over the reception-room, has sun for a few minutes only. The change in the atmosphere of the house is perceptible. My bedroom, which is in front, strikes a chill into me as soon as I enter it, and I am going to change to the back of the house, which has a northern aspect. It used to be the cold side of the house, now it is the warm. My light is seriously interfered with, and I have had to rearrange my office on that account. Then look at that street. As you see, this side, which never sees the sun, is damp and muddy. The opposite side is nearly dry. It is absolutely essential, in order to get rid of the microbes and germiniferous matter which are to be found in the damp streets of a city, that the sunlight should strike the gutters for some hours during the day. It is just as essential that the living and sleeping rooms of human beings should receive the direct rays of the sun. As to the interior sanitary condition of these apartment-houses, I have no statistics which will enable me to speak positively. There is, however, strong *a priori* evidence that they must be extremely unhealthy. The massing together of so many families in itself tends to promote disease, while the multiplication of drainage pipes and plumbing affords yet another foothold for disease. Among my own patients I know of some who suffer from the wholesale system of heating. Even if they shut off the steam, the presence of such immense steam-ducts in the walls renders their rooms unhealthily hot, and they have to pull the beds into the middle of the room before they can hope to sleep. I look, in fact, on the apartment-houses as a standing menace to the health and comfort of the community."

SANITARY CONDITION OF TENEMENT-HOUSES.—The report of the Commission on the Tenement-Houses of New York City was presented to the State Senate February 17. It estimates the number of tenement-houses in the city at 26,000; of these 3,000 are rear tenements, and in these is the greatest amount of sickness. The percentage of deaths in tenements has increased from 51.11 in 1870 to 56.50 in 1884. In the district known as the "Bend" the mortality of children under five years is over 65 per cent. The Chief Inspector, Mr. Owen, makes a supplementary report, in which he says that it is impossible to make tenants obey sanitary laws without systematic inspection, and such inspection is impossible with the small force of inspectors; all closets, vaults and school-sinks in tenement cellars should be removed; cellars in "made ground" with the tide influence are flooded at high tide; the city cellars lack care and cleanliness; the majority of bedrooms are without light and air; the darkness of the halls conduces to immorality; tenants generally appreciate the importance of sanitary measures; rents are unnecessarily high among the poorer tenants; illegal crowding is universal among the Polish Jews, the Italians, and the low Irish. A table is given, showing the total deaths, deaths in tenements, and percentage of the latter to the former.—*Sanitary Engineer.*

# BIOGRAPHY.

Dr. Louis Elsberg.—The news of the death of Dr. Louis Elsberg, which occurred at his home in New York City, on February 19, will be received by the medical profession of this country with genuine sorrow and regret. Among the foremost in his specialty throughout the world, laryngology has lost at once a distinguished light, and an earnest, able and enthusiastic worker. The success of Dr. Elsberg's personal career should be an inspiration to every young practitioner, while his professional eminence was not only an honor to himself, but, as he himself would have been the first to admit, a credit to the free and enlightened institutions of his foster-country, through the aid of which his education was originally gained.

Dr. Elsberg was born at Iserlohn, Prussia, in 1837. His family came to Philadelphia in 1849, at which time the subject of this notice entered the public schools, graduating in 1854 from the Central High School, with highest honors. He entered Jefferson Medical College a year later, and graduated in medicine in 1857. Having served as resident physician in what is now Mount Sinai Hospital, he went to Europe, where, under the instruction of Prof. Czermak, and having for his fellow-students Prof. Stoerck, of Vienna, Prof. Lewin, of Berlin, and Prof. Semeleder, he gained his first knowledge of the use of the laryngoscope.

He returned to this country in 1859, and at once began the active practice of medicine in this city, but shortly turned his attention exclusively to laryngology. In this he soon met with signal success, both as a practitioner and as a well-grounded authority in the literature of the subject, until, in later years, few could be found whose knowledge was more thorough or whose opinions carried greater weight.

As he was possessed of great energy of character and untiring industry, his aid was sought for and appreciated in many important directions, prominently by the American Laryngological Association. Of this society he was one of the founders, and, from its inception, one of its most active workers, occupying the position of president during the first two years of its existence, and contributing not a little to its prestige and success. Soon after the establishment of the association, Dr. Elsberg, in company with Dr. Cohen, Dr. Knight and Dr. Lefferts, started a special quarterly magazine, the *Archives of Laryngology*, upon such a high plane of literary and scientific excellence that it easily and at once took the lead among journals devoted to the same branch. Dr. Elsberg's labors in these two fields were widely recognized and well repaid, for they assisted materially in extending his already brilliant reputation. For several years he held the lectureship of laryngology in the medical department of the University of the City of New York, delivering at the same time an excellent course of clinical lectures at Charity Hospital. He assumed a similar professorship at Dartmouth

College, while, in the same position in the New York Polyclinic, his devotion and reputation contributed materially to the gratifying success with which that institution has met.

Dr. Elsberg was connected with many of the leading medical societies, both at home and abroad. His writings, which were extensive, were characterized by great clearness of thought and expression, and his style, eminently philosophical, was at the same time convincing and attractive. He restricted himself mainly to the consideration of limited subjects, furnishing monographs which were, in many instances, of exceptional value and importance.

Among his principal papers may be mentioned the following: "On the Structure and other Characteristics of the Colored Blood Corpuscles," "Changes in Biological Doctrines during the last Twenty-five Years," "The History of Laryngology," "Laryngoscopical Surgery," "Microscopical Study of Papilloma of the Larynx," "Lecture on Lepra of the Larynx," "On Paralysis of the Muscles of the Larynx," "Six Maxims on the Treatment of Foreign Bodies in the Larynx," "Neuroses of Sensation of the Pharynx and Larynx," etc., etc. He was greatly interested in general science, and was for some years librarian of the Academy of Sciences. His aptitude for acquiring knowledge was very great, and his memory excellent.

About two years ago he was attacked with a disease of the kidneys, which impaired his health and seriously threatened his life. From this he recovered, however, to all appearances so thoroughly that he was enabled to take up his usual duties, with what vigor those who were familiar with him knew well. For a long time after the attack he seemed solicitous about himself, referring guardedly to the future; indeed, in his last paper, read before the American Laryngological Association in May, 1884, on the subject of "Laryngeal Spasm," he explains in his introduction the object of the thesis, and adds, prophetically, "and I promise you that, *if I live*, I will prepare a more elaborate essay on the subject before our next annual meeting." About a month ago, however, he stated to the writer that he had never felt in better health and spirits in his life, and this assertion his appearance seemed fully to bear out. Ten days before his death Dr. Elsberg took a severe cold, but persisted in attending to his regular duties. Pneumonia soon set in, and, before it was generally known that he was ill, his death took place. His funeral, held at his late residence, was attended by a large gathering of his professional and social friends, many of whom came from great distances.

Personally, Dr. Elsberg was possessed of social qualities of a high order, and they were nowhere so well displayed as in his own home. In conversation he was learned and brilliant; as an entertainer he was most hospitable; while to his faithfulness as a physician the enthusiasm and affection of his patients, commanded by him to an extraordinary degree, are his highest tribute.

D. B. D.

Dr. James Gray Thomas.—The following passages are taken from an interesting sketch of the late Dr. Thomas, written by Dr. C. R. Agnew, which has recently appeared. We only regret that lack of space prevents us from republishing it entire:

James Gray Thomas, M.D., was born near Bloomfield, Kentucky, on June 24, 1835. He began his medical studies in Louisville, in the school in which the late Samuel D. Gross, M.D., LL.D., then taught. He graduated in medicine from the University of the City of New York in 1856, and began his life-work in Bloomfield, the place of his birth and his early home. He subsequently settled near Sardis, Mississippi, where he was in general practice when the late war broke out. He entered the Confederate service as a surgeon, and continued in that capacity till the war closed. He married in Savannah, November 16, 1865, and made that city the place of his residence. He served in the Legislature of Georgia through the sessions of 1875 and 1876. This apparent divergence from the line of his chosen vocation was made by him in obedience to a sense of public duty, and in compliance with the urgent solicitation of eminent citizens, who desired to return to the Legislature a judicious and public-spirited medical man, who would lead in procuring the enactment of laws relating to the interests of hygiene in the State. In accepting such public trusts he was especially moved by the hope that he might help to obtain for the State an effective health board. During the session of 1875, the first of his service, the Legislature passed "An Act to create a State Board of Health for the protection of life and health, and to prevent the spread of disease in the State of Georgia, and for other purposes." He took a most important part in the preparation and passage of this measure. . . . .

In the winter of 1881 Dr. Thomas had strongly urged the importance of organizing in Savannah a citizens' sanitary association, looking to the improvement of the public health through the united efforts of private citizens, and as auxiliary to established public methods of sanitation. The result was a public meeting held in the "long room" of the Exchange, December 14, 1881, largely attended by leading citizens of Savannah. By special invitation, the meeting was addressed by Dr. Thomas. His views were so warmly adopted that the organization of the proposed association was immediately authorized, and carried into effect February 10, 1882. On this occasion he was elected president of the association, which began with an enrollment of 259 members, and subsequently largely increased. Dr. Thomas continued in this office to the time of his death.

Thus, while the doctor was assiduous in the private practice of his calling, and never neglectful of its solemn obligations, he was always concerned about the welfare of the public, and ready in suggesting judicious plans to enlist public-spirited citizens in measures for the general health. He was rarely absent from his work, and only for brief periods of rest, when those for whose health he felt a deep sense of responsibility were least liable to be exposed to epidemic influences. He was an esteemed member of the American Public Health Association, and no one who had the privilege of attending the session of that body in Savannah will forget how much the success of the meeting turned on his unostentatious but effective services, and how freely and courteously the hospitalities of his delightful home were dispensed.

His interest in the National Board of Health was early, consistent and continuous. He was not only a physician, he was also a patriot. It was in obedience to such motives that he left Savannah at the close of November last, although not feeling well, to attend a meeting in the City of Washington to complete the arrangements for the International Medical Congress to be held in that city in 1887.

He was taken ill on the railway train near Richmond, but continued on to his destination. After reaching Washington his malady took the form of pneumonia, and on the morning of December 6, 1884, he departed this life, following, as we have credible evidence, those who have endeavored to imitate the Good Physician. . . . .

His opinions, oral or written, on the medical questions of the day, were always marked by freedom from passion, and by a plain intention to avoid on the one hand the bondage of prejudice, and on the other hasty deduction and restless change. While he was alive to every good impression and suggestion of progress, he was deliberate and judicial in committing himself to that which was new. His honesty and prudence were manifested in these and many other ways, and his patients and professional brethren trusted him implicitly and were not disappointed. . . . . There was an indescribable quality in his presence and manners which won the confidence of all, but especially impressed and charmed his friends and companions.

It is a source of joy and inexpressible satisfaction that there are so many good and true men in the medical profession of the United States. The whole fraternity may well join in thankfulness that the career of Dr. Thomas among his colleagues, neighbors and friends was blessed as it was to his family, his patients and the State; that he attempted with so much modesty and unflinching purpose to realize in his daily work and in his public services so high an ideal, and that his last professional act, in the performance of which he gave his life, included the grand idea of the brotherhood of nations and the community of science and benevolence.

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Puerperal Fever in a Male.—The *Révue de Méd.*, 1884, t. iv., relates the case of a husband who nursed his wife, that was ill with puerperal fever, and who was seized by an acute febrile affection, characterized by chills, fever, albuminuria, tumefaction of spleen and liver, bronchial catarrh, hæmatogene jaundice and multiple suppurations. There was no other source of infection but the wife, and therefore the case is deemed one of puerperal infection of the male.

# REVIEWS.

A MANUAL OF DISEASES OF THE THROAT AND NOSE, INCLUDING THE PHARYNX, LARYNX, TRACHEA, ŒSOPHAGUS, NOSE AND NASO-PHARYNX. By MORELL MACKENZIE, M.D., London. Vol. II.: Diseases of the Œsophagus, Nose and Naso-Pharynx. New York: William Wood & Co. 1884.

When the first volume of this admirable work was given to the public, about two years ago, its superiority over other manuals upon the same topic was so evident that it received the unanimous commendation of all critics, and aroused a lively interest in the appearance of this, the second and final part. It is a pleasure to record that in completeness, clearness and scientific accuracy the work, as a whole, ranks among the foremost productions of modern medical literature. It contains sections upon the gullet, the nose and the naso-pharynx, and gives not only a complete and interesting bibliography of each special subject, but, what is more important to the general reader, full, plain and minute information as to diagnosis and treatment. In the chapter upon the gullet, much material is introduced which will not be found in other text-books, but which commends itself as explaining conditions not uncommonly met with and of great practical importance.

No one interested in the treatment of diseases of children should neglect to read the articles on "Œsophagitis in Infants" and "Thrush of the Gullet;" while those upon tumors, malignant and non-malignant, of the œsophagus, dilatation, strictures, foreign bodies and spasm are replete with useful matter. In the articles upon the pathology and treatment of the nose, readers in this country will feel a just pride, as a significantly large number of valuable suggestions and improvements are accredited to American authorities. A long and exhaustive chapter upon the much-neglected subject, "Insects in the Nose," will be warmly welcomed by all living in tropical climates, where such accidents are not uncommon.

The book ends with an appendix, in which a number of formulæ, useful in the treatment of nasal difficulties, are given.

DISEASES OF THE NOSE. By CLINTON WAGNER, M.D. Prof. of Diseases of the Nose and Throat in the New York Post-Graduate Medical School; Senior Surgeon Metropolitan Throat Hospital; Fellow of the American Laryngological Association, and of the N. Y. Academy of Medicine; late Surgeon and Bvt. Lieut.-Colonel U. S. Army. New York: Bermingham & Co. 1884.

The career of the author of the above book is so well known to readers of this JOURNAL that it is hardly necessary to explain that his long and honorable service as a general surgeon, and, during the last fifteen years, his labors in the special field of diseases of the nose and throat, have raised him to a position from which he can speak with highest authority. His treatise is an addition of far more than ordinary value to the literature of the subject, for the reason that it embodies the author's personal convictions, and gives as well a brilliant collection of rare and interesting cases, mainly derived from the exceptional clinical advantages which Dr. Wagner has enjoyed. While the acute and chronic inflammatory conditions of the nasal mucous membrane are given fair attention, it is the surgical aspect of the subject which has been best and most carefully handled, and from which, it is probable, the reader will derive the most satisfaction and instruction.

The Diagnosis and Treatment of Chronic Nasal Catarrh. Three Clinical Lectures delivered at the College of Physicians and Surgeons, New York. By George Morewood Lefferts, A.M., M.D. St. Louis: Lambert & Co. 1884.

This attractive little book, excellent in its matter, full of valuable suggestions as to treatment, and abundantly furnished with capital illustrations, will prove well worthy the attention of general readers of medicine. It has evidently been compiled with much careful study, and embodies the best of the latest ideas and methods of which it treats, presenting them with a tone of confidence which suggests at once a wide practical experience. The first lecture deals with methods of examination, the second of diagnosis, and the third of treatment. The author objects to the use of the nasal douche, except in cases of aggravated catarrhal inflammation with pent-up or hardened secretions, and in cases attended by the formation and impaction in the passages of hardened crusts, as in atrophic or fetid catarrh, and in ozena. In cases of simple catarrh, he advises cleansing of the nasal passages, by means of the "nasal spray," with one of the following solutions:

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|---|---|
| ℞. Acid. carbolic | sc. j. |
| Sod. bibor., sod. bicarb., *aa* | ʒ j. |
| Glycerine, aquæ rosæ, *aa* | ℥ j. |
| Aquæ, ad | O j. |
| M. | |

Or, better still—

| | |
|---|---|
| ℞. Sod. bicarb., sod. bibor., *aa* | ʒ ss. |
| "Listerine" | ℥ ij. |
| Aquæ | ℥ iv. |
| M. | |

After having been cleansed, the parts should be medicated by means of some convenient astringent spray or powder. In cases attended with hypertrophy of the tissue covering the turbinated bones, the septum, or the pharyngeal vault, the redundant tissue should be removed by some suitable means. Of the treatment of atrophic rhinitis, he says: "Unfortunately, the disease is beyond our powers of cure. The best that we can promise is to mitigate the urgent symptoms. I am well aware that some profess to cure; I have not been so fortunate." The indications for its treatment are twofold: first, to cleanse and disinfect the parts; secondly, to stimulate the atrophied mucous membrane, using for the purpose such drugs as sanguinaria ( ʒ ij.— ℥ ss.), galanga ( ℥ ss.— ℥ ss.), salicylic acid (sc. j.— ℥ j.), iodine (grs. i., ii.— ℥ ss.), etc.

THE PRACTICE OF SURGERY. By THOMAS BRYANT, F.R.C.S., Surgeon and Lecturer on Surgery at Guy's Hospital, London. Fourth American edition from the fourth and revised English edition. In one imperial octavo volume of 1,040 pages, with 727 illustrations. Philadelphia: Lea Brothers & Co.

It is with real pleasure that we welcome a new edition of this admirable work, of the peculiar merits of which we can speak from personal experience in its use. To the surgeon proper it presents many special points of excellence, and as a guide to the general practitioner it is quite unsurpassed. From his exceptional opportunities and vast experience, Mr. Bryant is entitled to speak as "one having authority," and the reader may feel assured that any method of procedure in surgical practice which he endorses with his approval is worthy of confidence. To mention only one instance of the great practical utility of this manual, there is to our mind no other method of treating fracture of the clavicle so simple and admirable, in ordinary cases, as that by the compress over the scapula and adhesive straps encircling the chest advised by the author. As has been well said of the work, "it teems with useful information, and, without the presence of any obtrusive dogmatism, its pages are not encumbered by learned disquisitions on the merits of different lines of treatment." The illustrations have always been numerous and excellent, but a large number of new ones have been added, many of which are even finer than any in the former editions. Altogether, there are in this edition fifty-five more illustrations and about a hundred more pages than in the second American from the third revised and enlarged English edition, and in the portions that have been added we note especially that due attention has been paid to the recent advances in abdominal surgery.

LECTURES ON DISEASES OF THE RECTUM. Delivered at the Medical Department of the University of the City of New York. By J. WILLISTON WRIGHT, M.D., Professor of Surgery. New York: Bermingham & Co. 1884.

Troubles about the rectum are often very perplexing to those not specially skilled in the management of such cases, and as these lectures were delivered to students, the matters of which they treat are explained in a plain and lucid manner, which cannot fail to render them acceptable to any who wish for practical information in this department of surgery.

MODERN MEDICAL THERAPEUTICS. A Compendium of recent Formulæ and Specific Therapeutical Directions from the Practice of Eminent Contemporary Physicians, etc. By GEORGE H. NAPHEYS, A.M., M.D. Edited by JOSEPH F. EDWARDS, M.D., and D. G. BRINTON, M.D. Eighth edition. 8vo., pp. 629. Philadelphia: D. G. Brinton. 1885.

Practitioners have long considered this compendium as a very useful addition to their working libraries, and in the numerous editions of it which the demand has rendered necessary it has always been the aim of its compilers to have the work embrace the latest contributions to our fund of therapeutical knowledge.

# PHARMACY AND THERAPEUTICS.

## A COMPARISON OF WEIGHTS, MEASURES, ETC., PREPARED BY REQUEST FOR CONVENIENCE OF READERS.

### FRENCH WEIGHTS IN TROY WEIGHTS.

| | | | |
|---|---|---|---|
| 1 milligramme | equal to | 1-65th | grain. |
| 1 centigramme | “ | 1-6th | “ |
| 1 decigramme | “ | 1½ | grains. |
| 1 gramme | “ | 15 | “ |
| 1 decagramme | “ | 150 | “ |
| 1 hectogramme | “ | 1,465 | “ |
| 1 kilogramme | “ | 14,720 | “ |
| 1 myriagramme | “ | 145,824 | “ |

### FRENCH MEASURES OF LENGTH IN ENGLISH MEASURES OF LENGTH.

| | | | |
|---|---|---|---|
| 1 millimetre | equal to | 1-1,000th | metre. |
| 1 centimetre | “ | 1-100th | “ |
| 1 decimetre | “ | 1-10th | “ |
| 1 metre | “ | 39 37-100th | inches. |
| 1 decametre | “ | 10 | metres. |
| 1 hectometre | “ | 100 | “ |
| 1 kilometre | “ | 1,000 | “ |
| 1 myriametre | “ | 10,000 | “ |

### FRENCH MEASURES OF CAPACITY IN ENGLISH MEASURES OF CAPACITY.

| | | | | |
|---|---|---|---|---|
| 1 millitre | equal to | 15 | troy grains | water. |
| 1 centilitre | “ | 150 | “ | “ |
| 1 decilitre | “ | 1,500 | “ | “ |
| 1 litre | “ | (1 qt.) 15,000 | “ | “ |
| 1 decalitre | “ | 150,000 | “ | “ |
| 1 hectolitre | “ | 1,150,000 | “ | “ |

Note.—1 grain troy is equal to 1 and 8-100ths grains in apothecary's weight.

### TEMPERATURE AND WEIGHT.

| | | |
|---|---|---|
| 1 lb. water at 60 deg. F. | equal to | 79-100ths pint, or 6,067 22-100ths minims. |
| 1 oz. “ “ | equal to | 1 5-100ths fl. oz., or 505 60-100ths minims. |
| 1 gr. “ “ | equal to | 1 5-100ths minims. |
| 1 fl. drachm water at 60 deg. F. | | 56 96-100ths grains. |
| 1 fl. oz. “ “ | | 455 69-100ths “ |
| 1 fl. gallon “ “ | | 231 cubic inches. |
| 1 fl. pint “ “ | | 28 87-100 “ |

### TEMPERATURES.

Centigrade.—To convert Centigrade (C.) or Celsius to Fahrenheit—multiply by 9, divide by 5, and add 32. Thus: 40 deg. C. multiplied by 9 equal 360 deg.; divide by 5, equal 72 deg.; add 32, equal 104 deg. F.

Reaumur.—To convert Reaumur (R.) to Fahrenheit—multiply by 9, divide by 4, and add 32. Thus: 40 deg. R. multiplied by 9 equal 360 deg.; divide by 4, equal 90; add 32, equal 112 deg. F.

### PERCENTAGE OF ALCOHOL IN WINES, LIQUORS ALES, ETC.

Strong Port 25, Madeira 24, Sherry 19, Malaga 17, Brandy 53, Rum 53, Gin 51, Whiskey 52 to 54, Burgundy 14, Sauterne 14, Champagne 12 to 14, Tokaya 9, Rudesheimer 10, Catawba 8 to 10, Cider 6 to 9, Mead 7, Burton Ale 8, Scotch Ale 6, Brown Stout 6, Porter 4, Strong Claret 17, Chateau Latour 9, Hock 9 to 12, Lachryma Christi 19, Vin Ordinaire 10.

A New Method of Treating Gonorrhœa.—Senftleben (*Monatsh f. prakt. Dermatol.*) used small medicated bougies, which he introduces into the urethra by means of an instrument that he calls a “pistol” (probably similar to a Sims' uterine applicator), pushing them down to the membranous portion, where they are left to dissolve. The first application is said to be very painful, but the sensitiveness soon disappears. The following is the formula for one variety of these bougies:

| | |
|---|---|
| Subnitrate of bismuth, white of egg, each | 15 grains. |
| Gum arabic | 45 “ |
| Glycerin | 5 drops. |
| Mucilage | 1 drop. |

Make ten bougies, from 7 to 10 ctm. long.

Iodoform, sulpho-carbolate of zinc, corrosive sublimate and nitrate of silver are also used, in amounts varying from one sixtieth of a grain (of the sublimate) to two grains. The following advantages are alleged: 1. The application is strictly localized at the seat of the inflammation, the exact situation of which may be determined previously by means of the endoscope. 2. The medicinal substance remains in contact with the inflamed surface for a long time, which is not the case when injections are given. 3. The inflammation is cut short, so that the danger of stricture is averted. The writer is not satisfied with pursuing the treatment until all discharge has ceased, but continues it until not a single sensitive spot remains in the urethra.—*N. Y. Med. Journal.*

Cocaine.—Dr. H. M. Biggs (*Journal of the American Medical Association*) concludes, concerning the physiological action of cocaine, that: 1. It has a powerful local anæsthetic action on the skin, the mucous membrane, and the eye. It usually produces mydriasis. 2. It has a depressant action on the heart, reduces the force and frequency of its pulsations, and finally paralyzes it (first the ventricles and then the auricles) in diastole. 3. In small doses it at first slightly increases the number of the respirations, then decreases it, and in large doses diminishes it rapidly from the first, finally causing death from a paralysis of respiration. 4. It at first slightly heightens and then greatly depresses the reflex action of the spinal cord in small doses. Large doses depress from the first. 5. Small doses at first slightly increase the irritability of the sensory nerves, then depress their irritability, and large doses depress from the first. 6. Both large and small (not very small) doses have a depressant action on the motor nerves. 7. It paralyzes the pneumogastric nerves. 8. Doses of moderate size diminish the excitability of the striated muscles. 9. The local application of cocaine to any of the more highly-constituted organs or tissues causes a temporary cessation of their functional activity. 10. From the local and constitutional action on the different organs and tissues, it is rendered probable that its general action is a local one, exercised on all parts for which it has a chemical affinity, through its presence in the blood. The results of these experiments would seem to indicate the use of cocaine in tetanus and strychnine poisoning.

POISONING BY INHALATION OF NITROUS ACID.—Poisoning by inhalation of nitrous acid is (*Western Druggist*, January, 1885) of frequent occurrence, and, in the majority of instances, fatal. In one case the sufferer had inhaled fumes from a mixture of Chili saltpetre and superphosphate; in another nitric acid had been dispensed in a tinned iron vessel, the person carrying the same enjoying the portion which did not remain in the can in the form of fumes. In still another instance a case resulted fatally to a chemist who had worked too much with fuming nitric acid, etc. Great care should be exercised in all operations where fumes possessing such fatal consequences are evolved, which is of frequent occurrence in pharmacy.

SALICYLIC ACID OINTMENT.—Balmanno Squire (*Druggist*, January, 1885) recommends that salicylic acid ointment be prepared by dissolving the acid in hot lard. Salicylic acid is readily soluble in warm lard at the ordinary water-bath temperature, in the proportion of 30 grains of the former to one ounce of lard, the strength in which the ointment is usually prescribed. The appearance of the product is superior to that obtained by simply mixing the acid with the cold lard, while the therapeutic effect is greatly enhanced, owing to the fact that "the remedy has undergone a solution in the lard."

ASEPTOL.—Dr. Trauser (*Journal de Médecine de Bordeaux*, January, 1885) states that aseptol, the antiseptic, has the following advantages over ordinary antiseptics: 1. It is very soluble in water. 2. It has but little causticity. 3. Even its prolonged use is unattended by any irritation. 4. It is not very toxic.

COTTON ROOT IN GYNÆCOLOGY.—Prochownick (*Archiv. fur Gynakologie, Band* XXII.), while declaring himself in doubt as to the value of cotton root in obstetrics, is of the opinion that the drug is of decided value in all forms of uterine hæmorrhage. It is in these of more value than ergot.

ERGOTIN BY THE MOUTH.—Dr. R. Kobert (*Archiv. fur Pathologie,* December, 1884) claims that ergotin given by the mouth becomes dissolved and weakened.

RHIGOLENE, A LOCAL ANÆSTHETIC.—The use of cocaine as a local anæsthetic has directed attention to the value of petroleum naphtha for similar purposes.

The name rhigolene was given by Dr. H. J. Bigelow, of Boston, to a light inflammable liquid obtained by the repeated distillation of petroleum. It is probable that it is not a definite chemical compound, but it is said to be one of the most volatile bodies in existence. By using it in the form of a spray with a common atomizer it produces a degree of cold sufficient to freeze any tissue with which it may come in contact. Dr. W. Chapman Jarvis, of New York, finds that its action is more decided than that of cocaine, although of shorter duration. Skin and mucous membranes may be divided deeply and freely without fear of pain or hæmorrhage. Its effects pass off quickly, so that the operator has to act with promptness. It is a good plan to employ it in conjunction with cocaine. When not in use it should be kept on ice or in a cool room, tightly corked. In a warm place it would probably burst the bottle or blow out the cork. It has been accused of possessing explosive properties, but probably it is safe if not brought in contact with an open flame. It should not be used for cases which require artificial light. Very little is known about it as yet, although its properties were cursorily investigated some years ago.—*Lancet.*

## MISCELLANEOUS.

Fibroma of the Mamma at the Age of Seven Years.—At a meeting of the New York Academy of Medicine, held March 5, 1885, Dr. George G. Hopkins, of Brooklyn, read the report of the case of a girl eleven years of age on whom he had performed amputation of the breast for fibroma. Four of the glands of the axilla were involved, and were also removed. Four years before a hard tumor, an inch in diameter, which he pronounced malignant, had been removed from the other mamma by her physician in the West, and there could be little doubt that it was of the same nature as the second growth, which was first noticed about six months after the removal of the first. The mother of the girl was the subject of uterine fibroids. Dr. Hopkins remarked that Dr. S. W. Gross, who states in his work on mammary tumors that only six per cent. of the cases of fibroma are under the age of 16, had said that he had never heard of a case under 12.

The Profession in America.—In his inaugural address, as President of the New York Academy of Medicine, Dr. A. Jacobi pays the following tribute to American medicine: "They say we have no John Hunter. All Great Britain, in all its pride, has but one. No Bichat or Laennec. All the glory and elegance of France have but one. No Virchow. All the centuries of toiling and philosophical Germany have produced but one. What we do have, however, is a medical profession with unbiassed minds, clear insight, critical eyes, undaunted industry, and that republican courtesy which recognizes—*suum cuique*—the peculiar advantages and services everywhere, and the democratic tendency of appreciating and appropriating the intellectual accomplishments of the globe, and of utilizing them for the practical necessities of the commonwealth. As long as the Confederation and the Union have been in existence, their medical men have been, to say the least, marching in line. In what the Anglo-Saxons have known and taught, they have both participated and co-öperated. Without the counting in of the original American contributions to science, the history of modern medicine would be incomplete indeed. Let Europe boast of her great names, this young community has the heirloom of the great names of Bard, Rush, McDowell, Drake, Beck, and many others of *past* years. . . . I might go on a long time, but I do not stand here to extol America or American medicine. Still, I feel strongly that we may be well satisfied with what we, not protected by governmental interference, unaided by a slow growth through centuries, have accomplished in a proportionally short time. The last few decennia gave us the library of the Surgeon-General's office, the "Subject Catalogue," "The Medical and Surgical History of the War," standard books, recognized as such in Europe, great journals, and a goodly array of valuable monographs, and vastly improved college education; they have raised great surgeons and clinicians of universal reputation, and a progressive profession whose aim and best efforts are directed towards the improvement of medical training, and the sanitary condition of the people."

German Medicine a Few Years Ago.—In the same address occurs the following: In Rokitansky's opinion the anatomical changes were the only thing in medicine worth knowing. Skoda for some time experimented carelessly and unsuccessfully with remedies; his ill-success and Rokitansky's teaching confirmed the nihilism of Broussais, against which Laennec protested in France, and made the expectative treatment and the nihilistic faith the gospel of German practice.

"This was the medicine—the patients' woes soon ended,
And none demanded: Who got well?
Thus we, our hellish boluses compounding,
Among these vales and hills surrounding,
Worse than the pestilence have passed.
Thousands were done to death from poison of my giving;
And I must hear by all the living
The shameless murderers praised at last."

But in Goethe's "Faust" this is said by an incorrigible philosophical roué, who is ready to give himself up to the devil, and in Germany it had the result that the public, who have a right to desire to be cured when they fall sick, preferred the homœopathic pill-box to the pathologist's post-mortem case.

Poking Fun at the Dentists.—At the annual dinner of the New York Odontological Society last month, when the powers of mastication displayed by the dentists reflected great credit on their art, speeches were made by a number of distinguished men in different professions. The last one was by George Fawcett Rowe, the actor and dramatic author, who was introduced as a sort of cosmopolitan tramp, who was one day in London, the next in Egypt, and the next in some other part of the world still. Among other things he said: "It has always been my custom in visiting a performing dentist to get out of my orchestra chair and out of the building as soon as I could. Speaking about Egypt, I find that the doctor on my left has been there. He went to examine several thousand mummies, to ascertain by their mouths whether there were dentists in those days. He says, and I agree with him, that there could have been no dentists there, for all the mummies had their thirty-two teeth, and in perfect condition."

The "Mind Cure" in Boston.—The "mind cure" is one of the hobbies of the day at the Hub, and one of the members of the Woman's Club is said to have written a letter to a sister member, in which she mildly rebuked her as a "malicious modern Sapphira" because she threw doubts on its efficacy. At an expository lecture given at a fashionable house on Marlborough street, the other day, one lady "gave testimony" that she spilled a kettle of boiling fat upon her hand: "And I took hold of my wrist firmly, and I said to that hand, 'You are not burned. You shall not smart.' And in a moment it was as well as ever."

Death After Giving Birth to Triplets.—The famous Holstein cow, Echo, owned by Mr. F. C. Stums, Proprietor of Maplewood stock farm, near Utica, New York, gave birth the 4th of March to male triplets (which are doing well), and died three days later. Her owner refused $25,000 for her, and was offered $5,000 for a calf, if a male, as she had given 23,775 pounds in one year, the largest record in the world. On March 9, Constance S., a Holstein heifer by Crown Prince III., a full brother of Echo, beat the record as a two-year-old, giving 81 pounds of milk in one day.

Some of Jefferson's Expenditures.—From an interesting account by Mr. John Bigelow, in *Harper's* for March, of Jefferson's expenditures, which is based on the original manuscript record in Jefferson's handwriting, we learn that for his wines he spent the sum of $2,622 in 1801, $1,975 in 1802, $1,253 in 1803, $2,668 in 1804, $540 in 1805, $659 in 1806, $553 in 1807, and only $75 in 1808, or an average of $1,356 per year. Madeira was his chief care. For some champagne which had been imported by the Spanish Minister, free of duty, and of which the Spanish Minister had "been so kind as to spare him 200 bottles," he insisted that it would be improper for him not to pay the duty, and accordingly he sent a check for the amount to the collector at the port where the wine had been admitted. Jefferson's fondness for shows and circuses was as great as a child's. The diary has numerous entries like the following: "pd for seeing a lion 21 months old 11½d.;" "pd seeing a small seal .125;" "pd seeing elephant .5;" "pd seeing elk .75;" "pd seeing Caleb Philips a dwarf .25;" "pd seeing a painting .25."

West Virginia State Board of Health.—Dr. J. E. Reeves, the most active member, and the secretary of the Board from its organization, has been obliged to resign his position on account of ill health. In his letter accepting the resignation, Governor Jackson says: "I greatly regret that the condition of your health compels you to take this step. You have been identified with the Board from its organization until the present time. Its objects have been not only, by investigation and proper action based thereon, to promote the public health, but also to elevate the standard of the medical profession in this State. To these objects I am aware you have devoted a large share of your valuable time, aided by a ripe experience in medical and sanitary science. Your labors in conjunction with other members of the Board have raised the standard of the profession to a higher plane than before attained by it, and through the operation of our health laws placed the State on advanced ground in the development of sanitary science." At the meeting of the Board at which Dr. Reeves' resignation was read, a resolution was unanimously adopted acknowledging his eminent services and regretting the necessity of his withdrawal. The president, Dr. T. A. Harris, of Parkersburgh, was elected secretary, to succeed Dr. Reeves, and Dr. C. T. Richardson, of Charleston, president. The Governor has appointed Dr. L. D. Wilson, of Wheeling, to the vacant position on the Board.

Emerson the Subject of Aphasia.—Dr. W. Ainslie Hollis, in a letter to the *Lancet*, says that Ralph Waldo Emerson (whose biography Dr. Oliver Wendell Holmes has just written) suffered during the last ten years of his life from well-marked symptoms of aphasia. Mr. Conway says: "There was something striking in the kind of forgetfulness by which he suffered. He remembered the realities and uses of things when he could not recall their names. He would describe what he wanted or thought of. When he could not recall a 'chair,' he would speak of that which supports the human frame; and 'the implement that cultivates the soil' must do for a plough." The conclusion of the letter is as follows: "This account of the ailment of the great American essayist is interesting from a medical standpoint, showing, as it plainly does, how an active brain will overcome apparently insurmountable physical difficulties due to localized disease of its substance. In the present instance I take it that this result was effected by utilizing circuitous efferent nerve tracts in the healthy tissue around the lesion."

Depression in Paretic Dementia.—In the last number of the *Alienist and Neurologist* Dr. J. G. Kiernan, Medical Superintendent of Cook County Hospital for the Insane, presents in tabular form 34 cases of paretic dementia, in 18 of which there was no depressing etiological factor. Of the other 16 cases locomotor ataxia preceded in 4, lues in 4, epilepsy in 1, myelitis in 1, paranoia in 1, senile insanity in 1, railroad injury in 1, and menopause in 3. On inspecting the table it is observable, he says, that the special differences produced by these depressing factors are that, in cases evolving from locomotor ataxia, depression always existed at the outset; those preceded by lues were as frequently optimistic as otherwise. These figures, therefore, tend to support the views advanced as to the frequency of depression at the outset of paretic dementia.

A Terrible Loss.—The Brandreth patent medicine works, at Sing Sing, were destroyed by fire a short time ago, and the material for several million pills destroyed, so that suffering humanity will have to get along as best it can on the old stock on hand until the establishment is again in running order.

Dulce est Desipere in Loco.—We are indebted to the New York *Medical Record* for the following account of the "Great National Congress of Scientific Animals." It happened that the beasts of the forest of Ouden, who were learned and skillful in relieving their fellow-creatures, determined to have a general congress for mutual talk. They met at the time named, and the Lion presided with great ease and dignity. In making his opening speech the learned president said that this was a most noble profession. He recounted the great progress which it had made, but believed that sanitary science was the thing in which the most glorious triumphs would be gotten. He touched upon the wonderful achievements of anæsthesia and vaccination, also upon Harvey and the circulation of the blood. He referred to Hippocrates, Galen, the immortality of the soul and the value of animal congresses, ending with a loud roar, which was well received. The Cinnamon Bear moved a vote of thanks for this unusually eloquent and perfectly original address. Thereupon, business beginning, the Goose arose and moved that the Fox be expelled from the assembly, as he had been seen consulting with the Duck, who was known to be no better than a quack. In the Section on Neurology the Rabbit related the outcome of his special studies on the "Tendon Reflex in the Hind Extremites of Irritable Mules," and showed several flattened skulls to illustrate the effects and beauty of this phenomenon. In the Section on Orthopædic Surgery the Lamb read a paper of great originality upon the "Development of the Hump on the Camel," and showed an apparatus which, if worn constantly for seventeen years, relieved the deformity in a large number of cases. In the Section on Diseases of Women and Obstetrics the Goat opened a debate upon the question, "Whether the Physician should Support the Perinæum or the Perinæum should Support the Physician," which was well maintained. Professor Guilielmus Capricornicus read a paper contending that pessaries were a great national blessing, and that all animals should wear them. Professor Sius Ferus reported two thousand operations for sewing up the cervix uteri, with fifteen successful results, upon which he was warmly congratulated. In the Section on Surgery the Ring-tailed Ape described his new operation for the treatment of intestinal wounds. This consisted of opening the abdomen, removing the whole abdominal contents, and substituting carbolized cotton; thus making the individual thoroughly aseptic. The Sacred Ox of Burmah read a report upon plastic surgery. He described a case in which he had successfully attached the hide of a rhinoceros to the back of a horse, thus rendering a saddle unnecessary. He had also transplanted the skin of a hen to the head of the Bald-headed Eagle, which had much relieved that animal from the effects of extreme heat and cold. In the Section on Diseases of the Throat and Nose the Giraffe gave his experiences with sore-throat, which were too long to be reported here. The congress then adjourned to a grand banquet, and having visited the insane asylum, two shoe factories and an orphan home, broke up to meet in the same place next year.

JUMBO.—Mr. Barnum gravely announces that Jumbo is constantly increasing in bulk, and that he is now a foot taller, and weighs over a ton more than he did two years ago. This, he says, furnishes cause for serious apprehensions, as, if he continues to increase in size, the time must soon come when, on account of his enormous proportions, railroads cannot transport him, and he will have to be left to enjoy his *otium cum dig.* at home. The moral, of course, is, that everybody must go to see him *now*, as the opportunity may never again be afforded them. The public, we think, however, need not be greatly alarmed on this score. To a man of the resources of the indefatigable Barnum, the enlargement of the capacities of a few railway tunnels and bridges would be a mere bagatelle.

LUCELLE DUDLEY.—The *Lancet* thus speaks of the mental condition of Mrs. Dudley, who shot O'Donovan Rossa: "Seeing that the story of her life is full of the most conclusive evidence of mental disease, with both suicidal and homicidal tendencies, it is manifest that she should be protected, and that society should be protected from her morbid impulses. . . . We cannot disguise the fact that she is neither more nor less than a person of unsound mind. It is nothing to the point that her utterances may be perfectly coherent, and the account she gives of herself entirely rational, the most dangerous lunatics are those who, while insane on some one point, or subject to impulses of violence, do not present, and, as a matter of fact, do not possess any morbid feature, except that which renders them dangerous to themselves or those about them, or, as would seem to be the case with Mrs. Dudley, to both."

O'DONOVAN ROSSA.—In the meanwhile the untamable Rossa has been lionizing before the servant girls of New England, carrying about with him, as Marc Anthony bore into the Forum the body of Cæsar, the overcoat he had on when shot, and exhibiting the little triangular puncture made by the bullet, carefully left in its original condition, as though to say, "See, what a rent the envious Dudley made!"

HELMBOLD'S BUCHU.—Helmbold, the buchu man, has been released from the insane asylum at Norristown, Pa., and threatens again to placard all the fences with life-like representations of his "Hottentots seen gathering buchu," executed in the highest style of pictorial art, and to flood the world with unlimited quantities of his wonderful health-giving beverage at the merely nominal price of one dollar per bottle. He thinks "there's millions in it" still.

HOW TO TRAIN GIRLS.—There is a club in this city known as the Twilight Club, the members of which, having recently undertaken to discuss the subject, "How should girls be trained?" were thus savagely scored by the funny man of the *Times*, in an article bearing the heading, "Ignorance and presumption:" What in the world could the sixty-odd gentlemen of the Twilight Club possibly know about training girls? They have never, so far as is known, been either mothers or nursery-maids, and they know about as much concerning the proper way of training girls as they know about dressmaking. And yet these persons, not having either the love of truth or the fear of female indignation before their eyes, deliberately talked about the training of girls as if it were a subject with which they had been familiar for fifty years. The debate was opened by a well-known sanitary engineer, who found fault with mothers. He said that "mothers were too timid about telling their daughters things." Are they, indeed! And what might be the "things" which mothers fail to tell their daughters? That sanitary engineers make desirable husbands? for example, or that the noblest study of womankind is drainage? How does the speaker know what mothers do or leave undone? A mother is not a sanitary appliance, neither does a knowledge of sanitary engineering render a man an expert in girls. The next reckless man was a physician. Of course, he said that girls ought not to wear corsets. The persistence with which doctors oppose the wearing of corsets tends to create the suspicion that corsets are powerfully prophylactic and ward off diseases that would otherwise call for the employment of doctors. In the case of this particular doctor, his suggestion that girls ought to play football shows what kind of a man he is. He remarked that "there is no game that gives the muscles of the body such perfect and healthful play as football," and that "girls could be provided with gymnastic suits and permitted to kick the ball about." It is plain that this doctor wants to set broken legs and monkey with broken ribs. He wants our girls to play match games under the Rugby rules, to trip one another up, to indulge in scrimmages, and to tear all the clothes from their backs and to contuse every separate organ in their bodies. Nice training for girls this would be! Why did he not recommend girls to enter the prize ring, and to fight under the Marquis of Queensberry's rules? . . . . Then a famous rifleman said that "a father could do but little toward training a girl," and he might have added that a clubman could do even less. The rifleman evidently had daughters of his own who read the newspapers, and he was very careful not to say anything that could get him into difficulties. . . . . Finally an ex-judge announced it to be his decision that "as a rule girls train their fathers." Let us hope that this is the case so far as the fathers of the Twilight Club are concerned. Girls may not be fully competent to train their fathers, but they know enough not to dine together in order to discuss the proper way to train fathers.

Sad Ending of a Honeymoon.—A young couple of Rochelle, Ill., who were married in November last, went to Germany on their wedding-trip. Returning to this country the latter part of February, they started for their Illinois home just in time to be caught in a terrific storm, which caused them to be snowed up for two days. Soon after leaving New York the bride was taken ill, but she was entirely without medical attendance, and it was not until they reached Chicago that it was discovered that she was suffering from small-pox. She was taken to a hospital, where a fatal result ensued.

Not Born to be Hanged.—At Exeter, England, on the 23rd of February, no less than three unsuccessful attempts were made to hang a murderer; the scaffold apparatus failing each time to work. The sheriff then decided to abandon his task and telegraph to Sir Wm. Vernon Harcourt, the Home Secretary, for instructions. The Home Department, realizing that the wretched criminal had already thrice passed through the horrors of death, humanely commuted the sentence to life imprisonment.

NITRO-GLYCERINE AS AN ARTICLE OF DIET.—"Talk about dynamite, I can tell you a true story of what nitro-glycerine once did in our State. It was out near Prairie du Chien, where they were blasting on the Chicago, Milwaukee & St. Paul road. The contractor had several kegs of the stuff in an underground place. One day a workman left the place open; by and by a hog came along, found a keg open, and, as glycerine is as sweet almost as honey, the animal filled himself. He came out by and by, and soon wandered into a stable which contained about forty horses belonging to the contractor. The hog got fooling around among the horses' hind legs, when one of them drew off and gave Mr. Hog a good one. The concussion started the business, and not a vestige was ever discovered of the hog or of a single horse or the stable. And where the stable once stood there was a hole in the earth 50 feet deep and 200 feet in circumference. Fact, gentlemen!"—*Madison Democrat.*

## MEDICAL NEWS.

BELLEVUE HOSPITAL MEDICAL COLLEGE.—The twenty-fourth annual commencement of the Bellevue College was held at the Metropolitan Opera House on Monday evening, March 9, when diplomas were awarded to 134 graduates. Some remarks were made by Hon. Wm. Dorsheimer, and the principal address to the class was delivered by Mr. Andrew Carnegie, of the Board of Trustees. The successful candidates for appointment in the Bellevue Hospital, named in the order of merit, were: 1, Sollace Mitchell, of Florida; 2, Lewis M. Silver, of New York; 3, Thomas J. Charlton, of Georgia; and 4, George G. Larcombe, of Georgia. The Carnegie Laboratory, which is nearly completed, will be opened during the spring session fully equipped with scientific apparatus, among which will be a culture-apparatus imported from Germany. The instruction in the laboratories will be under the direction of Professors Janeway and Dennis, who will be assisted by Drs. Biggs, McNamara and Thacher.

UNIVERSITY OF THE CITY OF NEW YORK.—The fourty-fourth annual commencement of the Medical Department of the University was held at the Academy of Music on Tuesday evening, March 10. The graduating class numbered 178, and Frederick O. Lloyd was the valedictorian. The address to the graduates was made by the Rev. Dr. John Hall, Chancellor of the University. The prizes for competitive examination were as follows: 1, R. H. Wylie; 2, A. W. Berle; 3, E. F. Arnold; 4, F. A. Rand; 5, C. H. Gardner; 6, J. C. Clark.

MEDICAL DEPARTMENT OF ARKANSAS INDUSTRIAL UNIVERSITY.—The sixth annual commencement of this school was held at the Opera House, Little Rock, March 4. There were eight graduates, and addresses were delivered by Gov. Hughes and Drs. E. R. Du Val and J. H. Southall. The usual prizes were awarded, and an honorary degree was conferred upon Dr. W. M. Lawrence, of Batesville.

CONFERENCE OF SANITARY PROTECTION.—At a recent meeting, called for the purpose of an interchange of views between the Mayor and the Sanitary Protection League, on measures to be taken in anticipation of the advent of cholera, it was decided that the calling of a public meeting be left to the discretion of a joint conference between the Board of Health, the Mayor and the League.

MEDICAL LEGISLATION IN TEXAS.—The Texas State Medical Association, through its Committee on Legislation, consisting of Drs. Cupples, Tyner, Chew, Daniel, McLoughlin and Burroughs, has issued an address to the Legislature of the State presenting and advocating the adoption of a bill providing for a State Board of Medical Examiners, based on the bill now pending before the General Assembly of the State of Ohio. They also present a bill creating a State Board of Health.

"THE PHYSICIAN HIMSELF."—The third edition of Dr. D. Webster Cathell's popular little work has been exhausted, and the fourth edition, greatly enlarged and improved, is now in press.

SMALL-POX IN LONDON.—The *British Medical Journal*, of February 7, says that the returns from the small-pox asylums, laid before the Metropolitan Asylums Board on January 31st, showed a very disquieting state of things in regard to the long continuance of the epidemic which has afflicted London and the suburbs of the capital. The number of fresh cases received in the fortnight was 548, against 448 in the previous fortnight—thus making, in round numbers, a thousand cases in four weeks. In the course of the fortnight, 82 had died and 362 had been discharged recovered, leaving 1,112 cases under treatment, a number exceeding by 98 the number left a fortnight before.

ONE HUNDRED YEARS OF PUBLISHING.—Messrs Lea Brothers & Co., the Philadelphia publishers, have issued an attractive volume of twenty pages giving a history of their house, which was established by Matthew Carey a century ago. The *American Journal of the Medical Sciences*, which was first published in 1820 as the *Philadelphia Journal of the Medical and Physical Sciences*, is, with the exception of the *Edinburgh Medical Journal*, the oldest existing medical journal in the English language.

UNUSUAL PREVALENCE AND FATALITY OF MEASLES.—During November, December, January and February there were 2,152 cases of measles, with 402 deaths, in New York.

SOCIETY OF PUBLIC ANALYSTS.—The third regular meeting of the American Society of Public Analysts was held at the Brooklyn Health Department, March 10, when Dr. Bennett F. Davenport read a paper on "Methods of Milk Analysis and a Mininum Milk Standard." A general discussion of the subject followed, and samples of milk were exchanged, so that the same samples could be analyzed by different methods and in the hands of different analysts.

NEW YORK MEDICO-LEGAL SOCIETY.—At a meeting of this society held February 18th, papers on "A Case before a Procurator Fiscal of Scotland," by Prof. J. Aubrey Husband, of Edinburgh, and "Putrefactive Alkaloids," by Dr. Thomas Stevenson, of London, were read.

AMERICAN VETERINARY COLLEGE.—The tenth annual commencement of the American Veterinary College was held at Chickering Hall, New York, when degrees were conferred upon 31 graduates. The first prize was taken by Haru Taha Yokura, of Japan.

FRANKLIN INSTITUTE, PHILADELPHIA.—On the 1st of March Dr. Henry F. Formad, coroner's physician, gave a lecture on the present status of the germ theory of disease, which was largely devoted to the technique of bacteria investigation, and on March 6th a lecture on the subject: "Practical Consideration of the Infectious Diseases, with Special Reference to Epidemics, and the Means of Preventing and Combating Them."

MICRO-BIOLOGY AT THE SORBONNE.—M. Duclos, one of the most distinguished of Pasteur's pupils, has been appointed the first Professor of Bacteriology at the Sorbonne, Paris.

MILWAUKEE MEDICAL COLLEGE.—Dr. H. V. Ogden (McGill) has been appointed Professor of Materia Medica, and Dr. James Dorland (McGill) Professor of Principles of Medicine.

GULSTONIAN LECTURES.—Dr. Wm. Osler, of Philadelphia, delivers the Gulstonian Lectures at the College of Physicians, London, this year.

MATERNITY HOSPITAL, NEW YORK.—Dr. Montrose A. Pallen has been appointed Consulting Obstetric Surgeon to this institution.

CHARITY HOSPITAL, NEW YORK.—The position on the Medical Board of Charity Hospital made vacant by the death of Dr. Louis Elsberg has been filled by the appointment of Dr. P. C. Wiener.

FUNERAL OF DR. ELSBERG.—The funeral of the late Dr. Elsberg took place February 23rd, and was attended by a large number of physicians, among whom were a hundred from the Polyclinic, where he was Professor of Laryngology. The pall-bearers were all prominent medical men, and eulogies were pronounced by Dr. J. Solis Cohen, of Philadelphia, and Prof. Felix Adler.

DEATH OF DR. ELLERSLIE WALLACE.—Dr. Ellerslie Wallace, for many years Professor of Obstetrics in the Jefferson Medical College, Philadelphia, and one of the authorities of this country in that department of medicine, died in his native city on the 9th of March, after a painful illness lasting more than two years. He was born in Philadelphia, June 15, 1819, and studied medicine under his brother, who was Demonstrator of Anatomy at the Jefferson. He was graduated in 1843, and afterwards succeeded his brother in that position; resigning at a later period to take the Chair of Obstetrics. Dr. Wallace claimed to be a direct descendent of Robert Bruce, of Scotland.

DEATH OF DR. NATHANIEL FORD.—Dr. Nathaniel Ford, a well-known Brooklyn physician, and the oldest member of the Kings County Medical Society, died March 9th. He received the degree of M.D. at Dartmouth Medical College, and was 73 years old at the time of his death.

DEATH OF DR. SIMEON A. FOSTER.—Dr. Simeon A. Foster, late Assistant Surgeon to the New York Orthopedic Dispensary and Hospital, died on the 8th of March at Jacksonville, Fla.

THE "EASTERN MEDICAL JOURNAL."—Dr. C. E. Nelson, formerly of the *Planet*, New York, has been named associate editor of the *Eastern Medical Journal*, published at Worcester, Mass.

PHILADELPHIA DENTAL COLLEGE.—The twenty-second annual commencement of the Philadelphia Dental College was held at the Academy of Music, Philadelphia, February 28. The graduates numbered 55, and among them were two from Australia, four from Canada, one from England, three from France, three from Germany, and one lady, Mary E. Fethesolf, of Pennsylvania.

Death of Mr. Olliffe.—William M. Olliffe, President of the New York Board of Park Commissioners, and a son of one of the oldest established druggists of this city, died, March 9, of tubercular laryngitis. He was one of the trustees of the College of Pharmacy, and for many years its treasurer.

New York's Water Supply.—From December 1 to March 1 the City of New York, with an estimated population of 1,350,000, used 111,000,000 gallons of water daily, or a per capita consumption of thirty gallons a day. 93,000,000 is supplied by the Croton Aqueduct, and the remainder is principally derived from the Bronx River. The extra daily waste ranges from fifteen to twenty million gallons.

Diphtheria in Canada.—By an Act of the Quebec Legislature, passed ten years ago, it is provided that in cases of death from small-pox, Asiatic cholera and typhus fever, disinfectants must be placed in the coffins with the bodies, and that the mayor of the municipality or a justice of the peace may, with the consent of the church authorities, prohibit the bodies of the victims of such disease from being taken to church before burial. Under this act the Lieutenant-Governor has ordered that, as diphtheria is very prevalent in the villiage of Ste. Scholastigue, this disease be added to those enumerated in this Act so far as that village is concerned.

Sanitary Council of the Mississippi Valley.—This council met at New Orleans, March 11, when Dr. Kedzie, of Michigan, chairman of the special committee appointed to suggest a plan of co-operation between the States of the valley to prevent the introduction of cholera, yellow fever and other epidemic diseases, submitted a report, which was adopted, recommending that special sanitary regulations, such as an inspection service on lines of travel, a thorough cleansing of cities and towns, the distribution of sanitary information, etc., be adopted by the State boards of health. A resolution was adopted asking the boards of health represented in the council to suggest the manner in which they think the $340,000 appropriated by Congress, to be used at the discretion of the President, should be applied.

Conviction of an "Opium Joint" Keeper.—Charles White, the keeper of an "opium joint" at No. 44 Clinton place, New York, was convicted in the Court of Special Sessions, March 6, and sentenced to three months' imprisonment in the Penitentiary, as well as the payment of a fine of $500. This is the highest penalty of the law, and it is the only time that it has ever been imposed for the offence in this city.

Medical Missions.—A convention in the interests of medical missions was held in Association Hall, Philadelphia, March 1st, at which an account was given of the medical missions in India and Burmah by the Rev. R. M. Luther, in China and Thibet by the Rev. James Cameron, M.D., and in Syria by the Rev. Gerald F. Dale. Prof. D. Hayes Agnew, of the University of Pennsylvania, spoke on "Christian Medical Colleges in Heathen Lands," and Dr. B. C. Atterbury, of Pekin, of some of the peculiarities of medical practice in China, and there was a general discussion of the whole subject of medical missions.

A Medical Wife Murderer Hanged.—"Dr." Albert G. F. Goersen was hanged at the County Prison, Philadelphia, March 5th, for poisoning his wife nearly five years ago. He was formerly a student at the Homœopathic Medical College of that city, but never graduated. His father, however, had a good practice, and when the latter died he succeeded to it. Before this time he had become addicted to drink. At the end of March, 1880, his wife, who had inherited considerable property, was taken violently ill. On the 2d of April she made her will, making Goersen her sole heir, and on April 4th she died. Suspicion having been aroused, the coroner was informed, and the stomach of the dead woman was found by Prof. Leffman to contain five grains of arsenic. One grain of the poison was also discovered in other parts of the body afterwards. Goersen was convicted and sentenced to death in November, 1880, but through one legal pretence or another the execution was deferred until the present time. At the time of the hanging a remarkable effect was produced on two other inmates of the Moyamensing Prison by the knowledge of what was going on. One man, Joseph Barrett, 55 years old, confined in a cell near the gallows, which was sealed during the execution to prevent him as far as possible from hearing any sound of it, was found dead when the cell was opened after it, his death being attributed to terror; and another prisoner, under sentence of death for murder, was thrown into convulsions from the same cause. On the day following the execution a quantity of poison was found, through information given by his religious advisers, in a cell formerly occupied by Goersen, and it is supposed that he had obtained it with the intention of taking his life when all hopes for a reprieve were gone; a design that was frustrated by his removal from the cell.

FATAL CIRCUMSTANTIAL EVIDENCE.—A physician of Woodford County, Kentucky, was sentenced on March 8th to imprisonment for life for the murder of a neighbor, whose wife was also indicted. Eleven of the jury favored the death penalty, but finally agreed on a life sentence. Soon after the death of the victim it was discovered that his life was insured for $25,000, all the premiums being paid up; when, the insurance companies becoming suspicious, an autopsy was ordered, and no less than an ounce of morphia was found in the man's stomach.

SIXTH INTERNATIONAL PHARMACEUTICAL CONGRESS.—The congress will be held in Brussels, Belgium, from August 31 to September 6, 1885, and one of the principal questions to be considered by it will be the matter of an international pharmacopœia.

GLANDERS IN A HUMAN SUBJECT.—Dr. N. H. Paaren, State Veterinarian of Illinois, reports having found that a farmer living near Belvidere is suffering from a well-defined case of glanders, which he contracted from horses affected with the disease.

HOSPITAL OF THE WOMEN OF MARYLAND.—Over $8,000 was realized by a recent ball given in aid of this institution at the Academy of Music, Baltimore.

ANOTHER CREMATORY.—Rochester, N. Y., is to have a crematory.

DR. HOLMES' "Life of Emerson," published the middle of December, is now in its eighth thousand.

HEALTH EXHIBITION MEDAL.—Health Commissioner Woolsey Johnson, of this city, has received from the Jury Superintendent of the recent International Health Exhibition at South Kensington, London, the complimentary bronze medal that was awarded him.

ENJOYING LIFE.—Dr. Drury Lavin, of Heatherdon, England, has arrived at New Orleans in his pleasure yacht, Ceylon, an iron screw steamer of 2,200 tons, with an excursion party consisting of thirty gentlemen and seventeen ladies.

Hospital Saturday in Australia.—The total receipts since the inception of the Hospital Saturday movement in Melbourne have amounted to £73,195. By the last collection nearly £8,000 was raised, an increase of about £800 over the receipts for the previous year.

# EDITORIALS.

"Lector, Si Monumentum Quæris, Circumspice."—As was stated in the announcement of last month, the effort will be made to continue this journal as a permanent memorial of its lamented founder. Already the assurances of assistance and encouragement on the part of its friends have been so numerous and cordial that there can be little doubt that the work will be crowned with complete success, so that the present management are enabled to look forward with no little confidence to the future. It will be the aim of the editor to maintain a high standard of excellence in the Journal, and if it does not meet with the approbation of its readers, it will not be because he has not devoted his time and best energies to the endeavor to make it useful and attractive to the profession. He enters upon the work with a deep sense of his responsibiliy ; but, feeling that his heart is in it, and craving indulgence for any shortcomings which may arise from errors in judgment, he asks the earnest support and co-operation of all who are interested in its success. As to the original contents of the present number, it is believed that they will be found of more than common interest. The article of Dr. Thomas calls attention to a condition which has never before been described, so far as known, except in the case of Dr. Emmet referred to, but which may perhaps be more frequent than there is at present reason to suppose. At all events, the fact that Dr. Thomas has met with two cases is sufficient to show that a deficiency in the anterior face of the pelvic portion of the spinal column is liable to be occasionally encountered; so that whenever there is the slightest suspicion that such a condition is present in any instance, it behooves the physician to act with the greatest possible caution. The paper of Dr. Bulkley, the value of which is immensely enhanced by the fact that it is founded directly upon clinical observation, is probably the most complete treatise on the subject that has yet been written ; and that by Dr. Cook, presenting, as it does, many details of procedure which are usually omitted in the reports of such cases, cannot fail to be of practical service to young physicians, and those who are only at rare intervals called upon to perform similar operations.

The Meeting of the Fifth District Branch of the New York State Medical Association.—The recent meeting in Brooklyn of the Fifth District Branch of the general Association of the State of New York, the first to be held, we believe, of any of the five district branches into which the latter is subdivided, was an occasion that will long be remembered with pleasure and profit by those who were fortunate enough to be present. It was not the regular annual meeting of the branch association, which occurs in October, but a special meeting for scientific discussion and social intercourse, and it is the design that such gatherings shall be repeated in the future in different parts of the district at such intervals as may be deemed advisable, the next one being appointed for Poughkeepsie, Dutchess County, in the month of May. The Fifth or Southern District of the State Association, it will be remembered, includes in its area Dutchess, Putnam, Westchester, Ulster, Sullivan, Rockland, New York, Kings, Queens, Suffolk and Richmond Counties. The State Association is very complete in its organization throughout, and its plan of operation seems admirably adapted to bring medical men in different parts of the State in closer sympathy with each other, to elevate the general standard of the profession, and to foster an increased activity in scientific work.

Certainly, the initial meeting of the Fifth District Branch Association was crowned with complete success in the accomplishment of the objects aimed at in its inception. It is true that the attendance was not quite as large as was hoped for, a circumstance which was no doubt due in great part to the fact that during the night and morning before the meeting one of the largest snowstorms of an exceptionally severe season prevailed; but it was a thoroughly representative gathering, and, as has been intimated, excellent work was accomplished at it. In the first place, a word of commendation is due the Brooklyn Committee of Arrangements for the admirable manner in which they provided for the comfort of the Fellows of the association. The Clarendon Hotel, where the meeting was held, although only recently opened, ranks in Brooklyn with Delmonico's and the Brunswick in New York in its facilities for entertaining such assemblies, and the accomodations of the handsome apartment in which the scientific proceedings took place and the good things of the collation which followed in the adjoining room, were all that could be desired.

The address of the president, Dr. Hutchinson, was quite a model in its way, brief, simple and appropriate, and some of its utterances deserve to be well pondered by the profession in this State. Having welcomed the members of the Branch Association and spoken of the remarkable success attained by the parent State Association during the first year of its existence, he went on to say: "Still, I desire to say that mere numbers is not the object; the aim is to get the best material for effective congenial work on behalf of the best interests of the profession and the public. One of the great features is freedom from legal control or complications. The association wants nothing to do with the Legislature or any other political body. It desires to be free to admit or reject whom it pleases. At all times ready to give information, when requested, to the civil authorities, executive, legislative, or judicial, it still wishes no official connection with them; for medicine is a voluntary, self-independent profession, governed by its own rules. At the same time, toward all our brethren of a like faith, but of a different policy, we all, I know, would have only the kindest feeling. Men of culture and honor can differ without anger or loss of mutual self-respect." Such language has the true ring about it. The conclusion of the address was as follows: "I am persuaded that as our Branch Association completes the initial work of organization and engages in the professional objects, and deals with the subjects germain to our calling, our union will be found pleasant and profitable, and one crowned with the approbation of our consciences and with beneficial results to humanity, to science and to ourselves."

The scientific proceedings were on a level with the high standard of excellence that characterized those of the meeting of the State Association last autumn, and the discussions of the subjects presented were notably spirited and attractive. The first paper was one by Dr. Gouley on contraction of the bladder, consequent upon cystitis, and in a future number of the JOURNAL we shall have the pleasure of giving it to our readers in full. As a personal clinical study by one of our principal authorities on genito-urinary complaints, it is of very great practical value, and we cannot refrain from referring for a moment to one observation made in it. This is in regard to the danger of exciting cystitis by the use of ether as an anæsthetic. In thirty cases out of one hundred operated on for hæmorrhoids he has found contracture of the bladder which originated in the effect caused by the ether inhaled at the time of operation. The injurious action of this agent is twofold: first, on the kidneys, producing polyuria, and, second, on the urine, which it renders of an irritable character. There is apt to be retention of urine from tonic spasm of the neck of the bladder, and hypertrophy with chronic contracture finally results. In order that these unpleasant results may be avoided, Dr. Gouley advises that patients undergoing operations in which ether is employed should be required to evacuate the bladder just before taking the anæsthetic, and again immediately on coming out from under its influence.

Dr. Flint narrated a case of great interest of aneurism of the arch of the aorta, presenting unusual difficulties in diagnosis on account of the lack of physical signs characterizing it. One of the most striking features was the occurrence of paroxysms of intense dyspnœa, during which there was complete absence of the carotid and radial pulse on one side, and in one of which the patient finally died. Dr. Flint thought there could be no doubt that the paroxysms were due to the effect of pressure on the recurrent laryngeal nerve; but it might be a question whether the urgent dyspnœa was the result of paralysis of this nerve, or of spasm of the glottis. A number of years ago he said he had reported a case in which death was supposed to be due to spasm of the abductor muscles of the glottis; but of late he had been led to believe that this hypothesis was incorrect, and that the fatal result was due to the opposite condition, paralysis. It was more rational to suppose, he thought, that pressure on the recurrent laryngeal nerve would give rise to paralysis rather than spasm, an opinion which was concurred in by Dr. A. Flint, Jr., from his observations in experiments upon the recurrent laryngeal nerves in animals. The last question in connection with the case which Dr. Flint discussed was, whether a paralysis of the abductor muscles of the glottis on one side was sufficient to cause death. It seemed to him probable that this was not the case; but where one side was affected there was a strong liability, through some sort of sympathetic or reflex action, the exact nature of which was unknown, of the paralysis becoming bilateral. The specimen from the case was presented, showing marked enlargement of the whole of the ascending, transverse and descending arch, with atheroma. There was also a pocket, half an inch in diameter, protruding directly into the trachea.

The last paper read was one by Dr. Squibb, on the oleate of cocaine, which he said he had hoped would prove as useful in producing anæsthesia of the skin as the aqueous solution of the drug was in producing anæsthesia of the mucous membrane. He knew that there was no possibility of finding a liquid which would pass through the epidermis with the same facility as a watery solution through the epithelium; but it occurred to him that, if a preparation could be obtained which would pass one-seventh as fast, and if this was made seven times as strong, the conditions would seem to be met for making as successful an application of cocaine to the skin as to the mucous membrane. Such a preparation, he supposed, would be found in the oleate, and the form of it which he decided, after a long course of preliminary experiments, would be the best for the purpose desired was an oleate containing 25 per cent. of cocaine in an excess of oleic acid. The next thing he did was to undertake a series of experiments for practically testing its anæsthetic effect on the skin, and he said that he was reluctantly obliged to confess that the experiments had one and all resulted in complete failure, so far as the production of any anæsthetic effect that could be available for surgical purposes was concerned. Except, perhaps, for certain special applications, as to the glans penis, anus, etc., and possibly for the relief of trigeminal neuralgias, in which it had not yet been tried, the oleate of cocaine, he concluded, had to be pronounced a useless peparation; an announcement which, coming as it does from such a source, will, we are sure, be received with a feeling of great disappointment on the part of the profession in general.

On the other hand, an announcement that will be received with much satisfaction by the profession and hailed with delight by a large number of invalids, was made just before the adjournment of the association by Dr. A. Flint, Jr., in some informal remarks which he made on the food of diabetics. This was, that a bread had at last been devised which contains only three per cent. of starch, an amount that is practically of no consequence whatever, and which at the same time has been found extremely palatable. It is made by the Messrs. Hecker, of New York, and a public announcement of its manufacture will be given at an early date. Bread has always been the great craving of diabetics, and as a non-starchy bread that could be eaten with relish has hitherto been unobtainable, this article is likely to prove an inestimable boon to this class of patients.

The Treatment of Open Wounds.—In the valuable paper recently read by Dr. Varick before the New York County Medical Association, which we republish in this number, he speaks with great confidence of the use of simple hot water as a dressing for wounds. Whether the explanation which he gives of its action, viz., that the value of the method is due to the protecting power of coagulated albumen, as well as the effect of heat in preventing shock—and there seems to be no good reason for doubting that such is the case—is correct or not, his success has been truly wonderful. As surgeon to two of the largest hospitals in the United States, in which there is an unusual proportion of cases of acute surgery, especially railroad injuries, Dr. Varick's experience has been immense; and yet he states that since he adopted this plan of treatment, nearly six years ago, no death from septicæmia or either primary or secondary shock has occurred in his practice. As an instance of its protective power against hospitalism, he related in his closing remarks at the meeting that on one occasion, at the Jersey City Hospital, when the house was greatly crowded, and when there were several cases of puerperal fever in the lying-in wards, and nine or ten cases of erysipelas in the surgical wards, two cases of railroad injury were brought in which involved amputation of the thigh; yet both these patients made good recoveries, notwithstanding the exceedingly unfavorable influences to which they were subjected.

An International Cholera Commission.—In view of the fact that the conclusions arrived at by the recent English Cholera Commission, as stated in the communication of Dr. Klein to the Royal Society last month, were totally at variance with those of Koch, except as regards the acknowledgment of the presence of comma bacilli in connection with the disease, the *Lancet*, very properly, we think, proposes that, instead of having independent Commissions from every country, there should now be formed an International Scientific Commission to investigate the subject anew. The work of such a Commission might result in throwing no little light upon it, and, as the *Lancet* says, so many of the facts concerning cholera harmonize with the germ doctrine that, in spite of the check administered to Koch's position by Dr. Klein, it would not be surprising if research eventually proves the views of the former to be very near the truth.

To be More Prompt.—In consequence of the sudden manner in which the present editor was called upon to assume the management of this Journal, some delay is unavoidable at present in its issue; but in a short time he trusts to be able to get it out promptly at the first of every month.

To Our Contributors and Exchanges.—All communications to the editor, as well as all exchanges and books for review, should be addressed to 22 West 31st street, New York. Business letters should be sent to the publishers' address, P. O. Box 1124.

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# GAILLARD'S MEDICAL JOURNAL

Scientia et Veritas Sine Timore.

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## ORIGINAL ARTICLES.

### ARTICLE I.—CIRCUMCISION A CAUSE OF REFLEX IRRITATION OF THE GENITO-URINARY ORGANS. By CLAUDIUS H. MASTIN, M.D., LL.D. (University of Pennsylvania), Mobile, Alabama.

More than ten years ago my attention was attracted to the frequency with which I was consulted, by persons of the Jewish faith, on account of chronic urethral discharges, irritable urethræ, and other affections of the genito-urinary organs. As the cases, in the persons mentioned, were always troublesome and difficult of cure, I turned my investigation toward the cause which was, apparently, at work in their production, and soon became convinced that the main factor was a preternaturally small meatus urinarius externus.

This condition of the urethra I at once detected to be almost universal in every individual of this special sect who fell under my observation; and, seeking the reason of the same, I became convinced that the narrowing of the urethral orifice was not congenital nor peculiar to the race, but was clearly the result of the early removal, *by circumcision*, of the prepuce.

The glans penis in the child, being covered by muco-cutaneous tissue, remains in this condition just so long as the same is protected by its natural covering, the prepuce. If, however, the prepuce is cut away at an early age, eight days or even longer, the glans becomes exposed to the rough contact of the child's napkin and other articles of clothing, and the consequence is it soon changes its muco-cutaneous condition, and becomes converted into almost true dermoid tissue; this being the condition in which we find the glans penis of every Jewish youth, as may be easily verified by examination.

Now, since nature has wisely protected the various outlets of the body by the intervention of a muco-cutaneous surface between the mucous canal and the true skin, we find these orifices remain in a normal and healthy state just so long as the muco-cutaneous tissue is preserved in its integrity. If, however, at any time or from any cause, the line of blending between the muco-cutaneous and the mucous tissue becomes altered or changed, there is lighted up an irritation which soon runs into an inflammation, followed by a deposit of retractile tissue around the orifice, which in time produces a permanent contraction.

We see this to be the case in those contractions of the lachrymal puncta, after long-continued inflammation of the tarsal edge of the eyelids; in the mouth after burns or ulceration of the lips; in the anus after ulceration around its verge, and, more noticeably true, in a contracted meatus which follows a balanitis associated with a long-standing blennorrhagia.

Just this condition of affairs is taking place in the urethral orifice of every child whose prepuce has been removed. The glans penis, uncovered and exposed to the air and rough articles of apparel, becomes irritated, then inflamed, and in time, losing its soft succulent condition, it hardens into a tissue almost like the palm of the hand; the union of the muco-cutaneous with the mucous membrane becomes abrupt, elasticity is lost, and the consequence is, a rude line of demarcation is formed, with its consequent deposit of retractile tissue, and a contracted meatus is the result.

Soon after having satisfied myself of the correctness of the opinion which I had formed in my own mind, I called the attention of my friends, Professor F. N. Otis, of New York, and Mr. W. F. Teevan, of London, to the fact, and requested them to investigate the subject, knowing that an enlarged clinical experience gave them ample facilities for so doing. Since then I have had increased opportunity, through a rather extensive Jewish clientage, to further investigate and establish the fact. But as yet I have not made any publication of the result of my labors, although I have accumulated a mass of interesting material, which at some future time I hope to be prepared to lay before the profession. An allusion to the subject has, however, been made in a paper entitled, "Infantile Circumcision a Cause of Contraction of the External Urethral Meatus," written and published in the editorial department of the *Annals of Anatomy and Surgery* by Dr. William M. Mastin.*

This is the only reference to the subject of which I have any information as having appeared in print.

The object of this paper is not to enter into a long detail or discussion of the anatomico-pathological points involved in this interesting subject, nor to tire the reader with a physiological disquisition upon reflex irritation of the genito-urinary organs; but rather is it to place upon record the clinical history of a few cases (selected at random from a large number) which will serve to illustrate the effects of circumcision, and show some of the singular and curious phenomena which take place in the nervous system when peripheral nerves are encroached upon by a deposit of retractile and cicatricial tissue.

Such phenomena have long been familiar to the profession, and nothing especially new is to be found in the fact of reflex irritation from certain conditions of the genital organs. The morning sickness of pregnancy is a familiar illustration of such irritation resulting from a gravid uterus. John Hunter, in his classical work on venereal diseases, as long ago as 1788, cited a number of interesting examples of such reflex actions, and in 1803 Everard Home reported a case of sciatica being produced by stricture of the urethra, and relieved by the cure of the stricture.† Sir Benjamin Brodie illustrated the subject with his case of a gentleman who suffered great pain in the foot and ankle, caused by an old stricture, and which was almost instantly relieved by the introduction of a sound through the obstruction.* Civiale, in his work on the urinary organs, makes frequent allusion to the subject; and within the past few years so much has appeared in our journals and the transactions of various societies that it would almost prove a work of supererogation on my part to call attention to such publications.

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* See *Annals of Anatomy and Surgery*, page 123, vol. iv. Brooklyn, 1881.

† "Home on Stricture," page 271, vol. ii. London, 1803.

Dr. Marshall Hall has so clearly demonstrated that the irritation of peripheral nerves produce centric disturbances in the spinal cord through the excito-motor system, and are thence transmitted back, that it would now be a difficult task to find a medical scientist who would for a moment question the truth of the proposition.

Speaking of the various causes of muscular contraction, he says: "There is another function, the phenomena of which are of a totally different order, and obey totally different laws, being excited by causes in a situation which is *eccentric* in the nervous system; that is, distant from the nervous centres." Again, "but in the first place, this function is by no means confined to the limbs; for, whilst it imparts to each muscle its appropriate tone, and to each system of muscles its appropriate equilibrium or balance, it performs the still more important office of presiding *over the orifices and terminations of each of the internal canals in the animal economy,*† giving them their due form and action. . . . . This property is characterized by being excited in its action, and reflex in its course; in every instance in which it is exerted, an impression made upon the extremities of certain nerves is conveyed to the medulla oblongata or medulla spinalis, and is reflected along other nerves to parts adjacent to, or remote from, that which has received the impression, . . . . the stimulus acting mediately and indirectly in a curved and reflex course along superficial sub-cutaneous or sub-mucous nerves proceeding to the medulla, and muscular nerves proceeding from the medulla." ‡

*Case* 1.—A. M., aged 12 years, a Jewish lad, well grown, and apparently in fine health, although listless and dull, was brought to my office by his father on the 9th of November, 1883. The history given was that he had no power of retaining his urine, and that his clothes were constantly saturated with the same. For the past three or four years he had been in "the habit of wetting the bed at night:" a habit against which all remedies had proved of no avail, and in spite of punishment and other means of prevention he had gone on from bad to worse until the present time. At first he was in the habit of "wetting the bed" only during the time he was asleep; but soon after it was found out that he did so as soon as he got into bed, and before he went to sleep. For this he was punished, but without breaking him of "the habit." If he had his clothing changed, it was soon saturated again, until at last he was left undisturbed. He was sent to school, and got along about as children of his age generally do, with the exception of frequently requesting the teacher to permit him to go out to pass his urine. This occurring so frequently, the teacher began to suspect the youth was malingering, and refused to grant his oft-repeated requests. The result was, he was unable to retain the urine, and he passed the same in his trousers. From this on, the trouble grew worse and worse, until finally he was unable to retain his urine either by day or by night; and, as a consequence, he was constantly saturated with the same—a constant stillicidum going on all the while, until he was brought to me for relief from this loathsome condition, the result of a so-called "paralysis of the bladder."

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* Benj. Brodie's "Lectures on Certain Nervous Affections," p. 38. London, 1837.

† The italics are my own.

‡ "Memoirs on the Nervous System," pages 3, 4, 5, 6 *et seq.* Marshall Hall London, 1837.

Knowing the history of this class of cases, and having before me a Jewish youth whom I was certain had been subjected to the requirements of the Levitical law, I felt certain that I should find a contracted meatus, and that most probably the whole trouble was reflex in its character, and depending entirely upon a strictured condition of the urethral orifice. An examination disclosed a flaccid penis which measured two inches in cirumference, with an approximate calibre of its canal of 20 millimetres. The prepuce had, at eight days of age, been cut closely away, leaving a gland entirely uncovered, which was now, from constant friction and exposure, covered by a dense, tough membrane, close up to the edge of a minute meatus, now contracted to a calibre of 9 millimetres—a closure of 11 millimetres from its normal state or condition.

Having had under my charge, about eighteen months previously, a young boy of Christian parentage, some six years of age, who was brought to me from a neighboring State, with a like history, and who upon examination proved to be suffering from the effects of a vesical calculus, and from whom I cut four small uric acid calculi, with complete relief of his eneuresis, I thought it best to be careful in hazarding a diagnosis, lest I should find a stone instead of a reflex nervous trouble. Hence, I proposed to enlarge the meatus sufficiently to enable me to search with a sound for any concretion which might possibly be within the bladder. This I did, and slit up the mouth to the normal size of the urethral calibre, viz., 20 m. A careful examination with the sound showed no stone present, either in the urethra or the bladder; but instead thereof I found a highly-irritable urethra and an exquisitely sensitive vesical neck. The treatment consisted entirely in the daily introduction of a smooth steel sound of 20 m. capacity, tepid hip baths, a solution of citrate of potass, largely diluted, to correct the acid condition of his urine, with two-grain doses of quinine and ten drops of the tinct. of chloride of iron three times each day, to brace up his general health.

The night after the operation he slept in a dry bed, and within the course of the next day his stillicidium had entirely ceased, so that he went on to a rapid and perfect recovery, and was discharged on the 26th of the same month, just seventeen days from the time he was placed under treatment. The case speaks for itself, and requires no special pleading to establish its diagnosis or justify the means resorted to for its relief. It was a simple reflex irritation of the genito-urinary tract, cured by the debridement of the contracted urethral orifice, the cause of the eneuresis.

The next case to which I shall call attention is one of peculiar interest; and, as it occurred in the practice of Dr. W. M. Mastin, and under my own observation, I shall furnish the report of the case as it has been placed at my disposal.

*Case* 2.—S. W. N., an Israelite of German extraction, aet. 24, medium stature, nervous temperament, and by occupation a book-keeper, consulted me, September 9th, 1883, for professional advice relative to a deficiency of sexual tone and power, from which he had been suffering for several years past, and which, too, was beginning to have a decided effect upon his physical and moral health.

A careful inquiry into his history, especially in relation to his present disorder, elicited the following: General health has always been robust until within a period of a few months, since which time he has been subject to excessive "nervousness," consisting of cardiac disturbances, vague apprehensions, tremors, etc. These phenomena have been accompanied by moderate loss of flesh and vivacity of disposition, with a want of interest in the ordinary affairs of life. He has never suffered from any venereal disease whatever, and his family history is devoid of hereditary taint or vice.

At about twelve years of age he began the practice of masturbation, which he continued irregularly until his fourteenth year, when, learning its pernicious effects, he relinquished the habit entirely. A year or so later he first indulged in sexual connection, and, as far as he remembers, the act was satisfactorily accomplished, and reindulgence followed at long intervals for another year. At this time he found that his sexual ability was noticeably diminishing, and has gradually but slowly continued to decline to the present date. Indeed, excluding the period mentioned, he does not remember to have accomplished the act properly since his seventeenth year. His symptoms now are found to consist in incomplete or semi-erection, thus rendering intromission difficult and often impossible, the penis becoming flaccid, and emission taking place immediately, and without pleasure, at the moment of entrance. He never could repeat the act, although frequently attempting to do so. Again, he has, as he expresses it, "no control over his sexual passions;" that is, lascivious thoughts, especially if in the society of females, will take uncontrollable possession of him, with intense desire, and followed by instantaneous seminal discharge, without erection. Nocturnal emissions are frequent.

An examination of the parts showed the penis to be of normal size and appearance, without foreskin—circumcised—testicles large and firm; meatus contracted, barely permitting the introduction of a steel sound of 11 millimetres, and encircled by a dense organized deposit of retractile tissue, but no evidences of trouble deeper within the urethra. The penis measures 3⅝ in. in circumference. He had often taken "tonics and nerve stimulants" by the advice of other physicians, and, though persevered in for a considerable time, no appreciable benefit had resulted from their use. He was now, however, ordered strychnia and hypophosphoric acid in full doses, associated with cold douches, friction to spine, absolute continence, and avoidance of all excitement of society.

September 20, 1883.—His condition remaining unchanged, and, believing the contracted meatus presented a factor of importance in his condition, free debridement of the orifice was advised, and accordingly practiced. Dividing it to the urethral calibre of 33 m., I found the deeper portion of the canal perfectly normal. The after-treatment consisted in introducing steel sounds of 33 m. on alternate days, until the incised meatus was perfectly healed, and at the same time continued the strychnia and phosphoric preparation, cold affusions, etc.

At the expiration of six or eight weeks he declared himself to be, in his own opinion, in perfect vigor; and, according to his desire, he was discharged February 1, 1884, with the advice to abstain rigidly from sexual indulgence at least for a month. About this date he sustained a severe contusion of the left testis, which confined him to his room and bed until the last of the month of March, thus enforcing the continence advised.

In April, 1884, he called at my office to report, and stated that he had recently accomplished the act of coitus entirely to his satisfaction, and that he had repeated the indulgence several times within a very short period. He stated, furthermore, that he possessed perfect control of his thoughts, and that erection under proper excitement was full and continued; nocturnal emissions had ceased, and he had not had an involuntary seminal discharge since the operation. His weight had very materially increased when, on the 1st of December, 1884, he called to report his condition and cure, which is permanent in every particular.

*Case* 3.—B. C., a young Jewish man, aet. 26 years, presented on 19th of July, 1884, with the following history: He was of fine general appearance, and no evidence of hereditary taint, never having had any serious attack of illness or injury. With the exception of a case of melancholia in the person of a sister, his entire family were in fine health.

Six years ago he contracted a blennorrhagia, and was treated with stimulating injections and the usual balsamic preparations. The active inflammatory stage passed off in the course of ten days or two weeks, leaving him with a thin gleety discharge, and "morning drop," which has persisted until the present time. His stream of urine showed no appreciable diminution in size, nor was he especially annoyed beyond the stain always present on his linen.

In the meantime, he had not contracted any new infection, although he had not been in any way overcareful in the indulgence of his venereal appetites. About twelve months prior to the time of his calling at my office he had been greatly troubled with difficult and painful micturition, and this, too, without any recent exposure or reason to think it was the result of a new infection. His urine was now passed with difficulty, and, as he expressed it, "burnt him like hot lead." There was no discharge, and nothing simulating a urethritis; no red and pouting lips, no inflammation of glans or urethra. The case had been pronounced "gleet" by his former medical adviser, and "a course of bougies" resorted to, but without any apparent or real benefit. For the past three months his stream of urine had gradually lessened in size, until it was with difficulty that he could void it at all, and he had been unable to procure rest either by day or by night, disturbed, as he was, by frequent and urgent calls to micturate. His stream of urine was not larger than a small-sized filiform bougie, and as a consequence his bladder was emptied only after long and violent straining.

All in all, he presented a deplorable condition of nervous irritability, anxious and despondent. A young man of wealth, with fine business prospects, and everything required to make life desirable, he had gathered around himself the luxuries and comforts of home, preparatory to uniting himself with an accomplished young lady in matrimony. Being engaged, and finding himself unfitted for the duties of the Hymeneal state—ardently attached to the object of his affections, and seeing all his hopes about to be blighted—he was on the borderland of madness. His emotional faculties were all aroused, and that peculiar morbid susceptibility, that sensitiveness of those who are "all feeling," had crept over him and induced a restless apprehension of some impending evil, a sort of suicidal mania, "which rejoiceth exceedingly, and is glad when it can find the grave." All the ambitious projects of his life had vanished; the bright anticipations of a cheerful home, radiant with the smiles of her whom he had selected to be the partner of his joys and his sorrows, had found a revulsion in that spectral melancholy which seemed to blight his life, and—

> "He heard a voice we do not hear, which said he must not stay;
> He saw a hand we do not see, which beckoned him away."

Everything seemed to unsettle and unfix his purposes. At one time he was full of hope, only to plunge again into the abyss of despondency, almost ready and willing to take any step to get away from himself. Such was his condition when he presented himself to me for advice and treatment.

And what did my examination reveal as the hidden cause of this terrible condition of the past four months? Simply a contracted meatus-urinarius, with its sequelæ, an irritable urethra and spasm of the bladder; a reflex nervous irritation, a want of unity of the nervous force, the result of a dense cicatricial tissue at the external urethral orifice.

An examination of the genitals showed a normal and usual condition of the penis and testicles, the former in its flaccid condition measuring in circumference 100 millimetres, equal to about four inches; this would give a urethra of 40 m., whilst I found the meatus contracted down to 20 m., showing a diminution of at least 20 m. in size. With a ball probe I encountered at one and one-half inches down the canal a distinct contraction which gradually narrowed until, for a distance of two inches down the canal, an 18 m. ball would barely pass, showing a distinct contraction two inches in length, with a calibre of 18 m., being in round numbers 22 millimetres less than the normal calibre of the urethra. When, however, the closed urethrametre was passed to the bulb and expanded to 40 m., it could be drawn along the canal, but not easily; this was more easily done when it was lowered to 38 m., and then it came out with perfect ease until it reached the vesical face of the contraction at three and one-half inches from the meatus; thus showing a contracted canal of three and one-half inches in length, which had gradually narrowed from 20 m. at the meatus to 18 m. at the vesical face. He was complaining of deep fixed pain in his perinæum, with dull pain over pubis, and a dragging sensation about the loins; frequent calls to urinate, which he did in small quantity, and with great pain at the time, comparing it to "hot lead." There was no inflammation, no redness, and no soreness about the glans, which, with the exception of its rough and hardened texture, and pinhole-looking meatus, was normal in appearance. His urine had been carefully tested, and revealed no bladder or kidney complication.

My diagnosis was accordingly made, and was to the effect that he was suffering from an irritable urethra and bladder, caused by a contracted meatus with a dense deposit of cicatricial tissue, which was impinging upon peripheral nerves and causing reflex phenomena ; and hence, I advised debridement of the meatus to its normal size, dilatation of the stricture, and in this manner relieve the case.

I must freely confess I was not altogether prepared for the result which followed, for when I examined the urethra I thought the stricture was soft, and would require a month or more before it could be dilated to the normal calibre of the canal. Upon opening the meatus, which was very dense and firm, I was astonished to find that all the spasm of the urethra had vanished, and that I had no difficulty whatever in introducing a 38 m. sound fully into the bladder. It is true there was some little soreness upon the passage of the sound, but no actual pain, nor was there the least force required in its introduction.

The night after the little operation he rested quietly, was not disturbed to evacuate his bladder, and from this on he made a speedy recovery. The after-treatment consisted alone in the daily use of the sound, with two grains of quinine and ten drops of the tinct. of the chloride of iron three times each day.

Within the course of a month he was entirely well, and not a vestige of the trouble remained which a month before had almost driven him to the verge of madness. He left Mobile soon thereafter for his home in the interior of the State, and a few weeks later I was the recipient of an invitation to attend his marriage ceremony, accompanied by a letter of thanks for the great service which he had received at my hands, and the assurance of his perfect restoration to health.

Such is a brief recital of an interesting case of reflex irritation from a contracted meatus, and one which clearly points out the obscure cause of some of these cases of urethral and bladder irritation, with the ready means at our disposal by which they may be relieved.

In illustration of my subject, I have selected three typical cases, each manifesting a different phenomenon, yet all springing from one and the same root. In one instance we find *relaxation*, with its attendant eneuresis ; in another, a loss of the virile power, and unhinging of the nervous system ; whilst in the third we see a *spasmodic* condition of a segment of the urethral canal, a perturbation of the nervous force, with its reaction upon the mental and moral condition of the patient. We have traced out and established the undoubted cause which has been at work, and the result of the treatment proves the correctness of the diagnosis. Other cases of equal interest could be presented, but the length of this paper precludes their mention at this time.

## ARTICLE II.—ETIOLOGY OF STILL-BIRTHS.* By JOHN SHRADY, M.D., New York.

Probably no incident of the lying-in chamber is more mortifying to the practitioner of our art than that of still-birth. Accident he fain would call it, were it not that the reflection upon his skill would be more than acknowledged. Explanations pass for naught, excuses are merely lame defences--cunning parries to cover his reputation; to him the terrible misadventure remains, a stalking ghost which "will not down at his bidding." In a paper read by the late Dr. George T. Elliott, before the New York State Medical Society, in 1867, the writer, after alluding to the case of the Princess Charlotte, in which both mother and child were lost, followed by the suicide of the attendant, Sir Richard Croft, remarks: "There is a mournful cadence in the simple words—still-births—which recalls many a blighted hope, many a professional regret."

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* Read at a meeting of the New York County Medical Association, March 16, 1885.

Statistical tables, which vary greatly in the summing up of the average mortality, do not shed much light upon the true causes of death. Besides, too, for prudential reasons in the suppression of crime, health boards and bureaus of registry in large cities require the burial of the fœtus of any age, and thus the accounting certificate, classifying the return as a still-birth, necessarily swells the death-rate more than the facts would warrant. Again, no statistics can discriminate between the conservative and the reckless practitioner, much less determine what should have been done for the credit of the obstetric art. Who can, in his own judgment, so far as any of these reports are concerned, draw the line between a proper waiting upon nature and the resort to more decided measures? And yet, as a conclusion to a somewhat faulty premise, Dr. Barnes accords to our predecessors no little praise for their makeshifts without instrumental aid. He thinks that their manual dexterity must have been marvelous! There were, it is true, living witnesses, but where were the mute accusers? Still, we cannot gainsay the fact that still-births are uncomfortably frequent, nor in our calculations, with wide columns of figures, can we hope to materially reduce the number.

Discussing our subject in a general way, in the front rank of devitalizing causes, of course, stands syphilis. Abortion, when this taint is present, usually takes place from the fifth to the seventh month of utero-gestation. As an agent of fœtal death it has long been recognized even by the oldest writers.

A. B., a politician, in his zeal to provide for the future majorities of his party, contracted a chancre, and with a rare generosity shared it with his wife. As is usual in these marital complications, the husband resorted to medical treatment, but the wife, in ignorance of her probable fate, did not. In the case of the husband, the resulting indurated bubo was laid open and allowed to slowly granulate. The usual routine treatment soon restored the patriot to society, but not so his wife, who became completely saturated with the virus. She had an eruption, mainly rupial in character, invading even the scalp and forehead; this was quite intractable to remedies, and even pronounced incurable by a gentleman well-versed in dermatology. This salt rheum, which for family reasons we agreed to call it, was rapidly undermining her constitution, and threatening the establishment of a diathesis, when she became pregnant, and in due course of time expelled a putrid, seven months' fœtus. During gestation she was assiduously plied with iodide of potash in doses varying from twelve to fifteen grains thrice daily, with the hope of saving the child rather than with the expectation of curing the mother. Success was only partial, as perhaps the gain was in the direction of a more advanced development. Strange to say, after delivery the mother's eruption entirely disappeared, and her recovery may be regarded as assured, since the abortion occurred fully ten years ago, and she has not since had occasion to consult a physician. The query is pertinent, Was the cure coincident with the birth, or did the birth in a measure purge the maternal system?

C. D., the wife of a newsdealer, contracted syphilis from her husband, and evidenced the dyscrasia in the shape of nodes, and a unilateral psoriasis, together with a profuse shedding of hair. Her health, as she expressed it, was miserable—pains in the bones "murdered sleep"—and so on through the category. There was no doubt of the original lesion, as the husband proved to me in a professional consultation, and by a frank confession of exposure. He was treated; his wife not. Despite all warnings, pregnancy must have resulted during treatment of his case, although it is to be admitted that not much dependence is to be placed upon nice calculations. As soon as this fact was established beyond a cavil, the exhibition of iodide of potash was begun, the average dose being ten grains as long as her stomach would tolerate it, the plan adopted being that of alternate suspension and resumption. She was under treatment throughout the entire period of utero-gestation. There were some mutterings of a threatened catastrophe in the shape of a feeble vitality on the part of the fœtus, even to the extent of a hæmorrhage or two, but a plump male infant in due time saw the light, and is now about seven years old. The mother is still suffering from constitutional syphilis.

E. F., wife of an amateur musician, had successively two dead-born children, both small, and one putrid. She said that for the past two years she had suffered considerably from throat difficulties, for which she was mainly treated in a leading dispensary of this city. The husband asserted his purity of conduct, but acknowledged that he had an abscess in the groin, which he thought was originally caused by straining after a high note on his trombone. As this woman was taking iodide of potash in combination with a bitter when she first consulted me, I advised her to continue it, which she did all through her pregnancy. The child born was feeble, and accompanied the parents to a country residence two years later. The subsequent history of the family is unknown. If the mother's health has suffered no further deterioration, may we not accept the living child as evidence of a constitutionally valid cure, so far as the mother is concerned?

G. H., with no other history of syphilis than that in early life she was a ballet girl, and her first husband a sea captain, had several miscarriages, and only one living child, a girl of fifteen, who had aphonia, and an unshapely nose, caused by the ulcerative destruction of cartilaginous and osseou tissue. The mother was a long time under my treatment for broken-down nodes upon both legs, and, as she always expressed a strong desire for progeny, I could not charge her with the guilt of an interference with natural laws.

I. J., another wife, gave birth to a female child with a congenital coryza, club-shaped nails, and a scaly, patchy eruption of a florid hue. The child recovered, and when last seen by me was seven years old. The mother had an inveterate palmar psoriasis, perhaps non-syphilitic, although her grandmother received treatment in an eye infirmary for iritis. In this case the clothing of the child's father in the wash-tub was the contaminating medium, and the point of infection the fingers, as the grandmother verified by a suspicious scar upon the second joint of the third finger, dorsal aspect, which she said was caused by "a sore that took a long time to heal." The mother, along with the immediate family, left to reside in the country when the child was about a year old. Returning, however, she again came under my care when in the third month of pregnancy. As she gave the history of several miscarriages, she was ordered iodide of potash, and took it freely, abandoning it only upon the birth of the child, which proved to be both lusty and vigorous.

These are cases salient in the memory, barren of dates, and extending over a period of years, without any claim to a unique experience, but merely illustrative in character. I desire to draw attention to the fact, that in these citations the maternal system was thoroughly saturated with the syphilitic virus, and the fœtal inoculation was also necessarily complete. May it not be averred, in accordance with the opinion of an observer, whose name has escaped me, that the female is more likely than the male to transmit syphilis to progeny? Again, without claiming too much for the iodide of potash treatment, I cannot pass over with justice the query of the late Dr. E. R. Peaslee, whether the success of ultimate maternity may not be due to the gradual wearing out of the syphilization, as manifested by the occurrence of abortions at successively longer intervals, say, the third, fourth and fifth months. I can recall an instance in point, that of a mother, who, after twelve expulsions of fœti of various degrees of development, crowned her hopes in her forty-fifth year by the birth of a healthy boy, at present beginning his education at a primary school. Others might, perhaps have been saved, but for her sturdy opposition to the induction of premature labor. In this case the therapeusis was chlorate of potash (grs. xv.), in combination with the tinct. ferri chloridi, persistently employed during the last three months of utero-gestation.

There are other maternal dyscrasias which might be discussed as factors in still-births, such as malarial and uræmic poisoning, the concurrence of eruptive fevers, the implication of vital organs and the supervention of nervous shocks. Of all these, uræmia seems to be the most prolific of danger to the fœtus, and yet even here the latter's vitality approaches the marvelous. As a rule, despite the resources of our art, mother and child in cases of this kind perish together. So far, however, as my own experience is concerned, in cases of scarlet fever in the lying-in-chamber, the child born during the incubative stage of the maternal disease finally escapes all contagion whatsoever. Phthisis as being essentially a devitalizing agent to the unborn is to be doubted. On the contrary, the generative function expends all its energies in saving the new and jeopardized life. Many here present can recall cases where the birth of a plump child, after an easy labor of a few hours where escape from catastrophe seemed impossible, was not followed by the mother's death for some days. The child, however, does not usually complete its first year.

Passing from development to local causes, with special reference to fœtal deaths occurring before labor, we find that metritis holds a prominent place as a disturber of nutrition. How this is possible can readily be seen, since the uterine mucous membrane is to the placenta what periosteum is to bone. When metritis is chronic in form, the ovum is not likely to retain its vitality any number of months. Malformations of the uterus, although relatively rare, are likewise mentioned as productive agents in the blight of the ovum at any stage of development, but presumably at any early date. Dislocation and flexions of the womb also open up a field of discussion, but for our present purpose must needs be dismissed with a bare mention.

In considering the more debatable portions of our subject, we have to mention the diseases of the placenta. To quote the words of Lusk: "Many authors dispute its very existence, contending that the morbid changes hitherto referred to placentitis are simply due to retrogressive metamorphoses in the extravasations. Other writers affirm its existence, assign to it etiological relations with metritis and endometritis, and describe its pathology under the following heads: (*a*) congestion, (*b*) hepatization and induration, (*c*) suppuration."

Chief among the frequently-mentioned causes of still-births is fatty degeneration of the placenta. The term has undoubtedly been abused, in the desire to offer the readiest explanation of many phenomena, and has sometimes been adopted to conceal ignorance. The question has been raised in the minds of some, Is not the fatty placenta a product of fœtal death, and is it not in accordance with the general law in all retrogrades from a higher to a lower organization, *e. g.*, as in the case of cicatrices, where the reparative method falls away from the standard of original structure? A certain amount of fatty degeneration is present in every placenta at about the eighth month of pregnancy, and is, in some respects, analogous to the process of involution in the uterus itself, or, at best, to condense the words of Paget, exists as a defect rather than as a disease of nutrition. The shadowy line dividing the *post hoc* from the *propter hoc* is yet definite enough to prevent agreement among disputants.

Still, Dr. Charles A. Leale, in a paper entitled, "Degenerations of the Placenta," read before the New York Academy of Medicine, adduces some very striking instances which seem to corroborate the affirmative side of the question. Speaking of a placenta weighing only six ounces, presented by him before the N. Y. Pathological Society, April 22, 1874, he says:

"Throughout the substance of the organ were three lobes of fat, each about the size of a small hen-egg, which could be easily seen through the thick membranes of the fœtal portion of the placenta as semi-translucent masses, while a very delicate transparent membrane was all that covered them on viewing the organ from its maternal surface. They were situated at equal distances from each other, and midway between the insertion of the cord and periphery of the placenta; lines drawn from their distal extremities would have represented a right-angled triangle. On removing the delicate membrane on the maternal surface they were found to be cavities filled with liquid fat, having their base and sides lined with soft, yellow, fatty tissue, showing complete destruction of at least one-third of the entire placental tufts. On the surface of the amnion, over its entire extent, were seen a large number of granular fatty spots, the size of small peas, which destroyed the usual transparency of healthy membrane, giving to it a dirty-yellowish and thickened appearance. The infant was a miserable, puny and wrinkled boy, weighing about five pounds, having barely sufficient strength to cry."

The father was syphilitic, but supposed himself cured, while the mother showed no traces of infection, although, in the words of the reporter, "soon after conception she changed in appearance, became pale, fretful and extremely haggard-looking, losing all energy, and becoming so sensitive to slight variations of temperature as to have frequent attacks of bronchial irritations, and leading her relatives to suppose her to have chronic pulmonary trouble."

Dr. E. S. McKee read the report of a case before the Cincinnati Academy of Medicine, January 19, 1885: "In 1882 Mrs. C. presented herself for treatment at the dispensary of the Medical College of Ohio, with the following history: Aet. 34, American, married at 15, lived with her husband two years and had two miscarriages; remained a widow one year, remarried, and miscarried eight times. These ten miscarriages occurred during the fifth, sixth, seventh and eighth months of utero-gestation, one only, the last, being later than the seventh month. Some of these occurred as frequent as two in the same twelve months. On examination she was found pregnant. Her present husband had always enjoyed excellent health, and her first, she said, was likewise healthy. Her own health had been fair. No history of syphilis could be obtained, nor did physical examination show any evidence of this disease; no malformation of the uterus, chronic metritis or other local diseases explaining the frequent miscarriages were found. On further questioning she said, to use her own language: 'The doctor, who attended her about eight years ago said the afterbirth was nothing but a chunk of fat, and took it home with him.'

"Presuming the cause of the trouble to be fatty degeneration of the placenta, she was put on chlorate of potassium, fifteen grains three times a day. This remedy was continued with but few intermissions, and an occasional laxative pill to keep the bowels open until gestation was completed. A healthy boy was born. He promised to do well, but succumbed on the ninth day to an overdose of paregoric administered by a nurse.

"July 10, 1884, she appeared again, about three months pregnant. On the advice of Dr. Palmer she was for the second time placed upon the chlorate of potassium. She took the remedy in fifteen grain doses three times a day, and for a time took as high as thirty grains, morning, noon and night.

"August 18, the fœtal heart was plainly heard. The chlorate of potash was given constantly with tinct. ferri chloridi, except when such remedies as tinct. nux vomica or bismuth were demanded on account of stomach disturbances incident upon the pregnancy. At various intervals the fœtal heart was noted to to be beating nicely, and on November 25 a healthy boy was born at term who still lives.

"In the last delivery, which was late at night, the messenger failed to get me, and returned to find the baby born. Before my arrival the placenta had been made away with. But for that unfortunate incident the placenta would have been carefully examined."

Tubercle, averred by some to be occasionally present in the placenta, and to be one of the causes of fœtal death, is strenuously denied by Wilks and Moxon. These joint authors claim that the amorphous deposits which have done duty as tubercles are made up of altered blood. Among the other classified degenerative causes may be mentioned the calcareous, the fibrinous and the waxy, as associated with leucocythæmia, the pathology of which we shall not stop to discuss.

A certain class of causes are to be regarded as mechanical, both in their origin and effect. To direct blows, falls and the like, have been attributed many a still-birth; but the number of mothers who have escaped this catastrophe can never be counted. I am inclined to doubt the efficiency of these means in the production of the just named result, certainly to such an extent as to qualify any direct testimony in a medico-legal examination. The mother, not always a passive agent in these matters, may have seized upon the coincidence as opportune, so that, in accordance with the mercy of the law, which allows all doubts in favor of the prisoner, the real criminal may escape punishment. In those instances where the death in utero is deferred, occurring at length as a marasmus, perhaps a gradual detachment of the placenta, by reason of an intervening blood-clot of sufficient bulk, acts as much as a lethal factor as the somewhat untenable placentitis.

Prolapsed funes have contributed their quota towards fœtal mortality, this being especially the case when the accident has occurred before the arrival of the medical attendant. The usual history of the case is, that a gush of the amniotic fluid floats down the cord with scarcely a warning pain.

Thus far we have discussed the matter chiefly from the maternal side, having endeavored, so far as the brief limits of our paper would allow, to condense the present state of our knowledge as expounded by others rather than to present any novel views of our own.

But, as the late Professor Elliott intimates, there is a side to the question which has never claimed the attention it deserved, and that side can never be fully investigated save in the light of autopsies.

The pathology of fœtal life is still obscure, and yet its elucidation would probably afford a clue to many a vexed question in that department of medical science, for here we have to deal with embryonic, and, consequently, simpler forms. We have a better opportunity to study minutiæ. Indeed, for the matter of that, we might borrow light from the lower animal forms.

Unless when a medico-legal question is raised, autopsies upon still-born children are exceedingly rare—the opposition of the family presents an insuperable barrier to our investigations. We are generally met with the query, "*Cui bono?*" and the assumption that, as physicians, we ought to know all about the case without ocular demonstration. Yet a case of suspected infanticide is on record in England in which an autopsy exonerated the accused mother, by proving the existence of a diaphragmatic hernia, the small intestines being entirely lodged in the left side of the thorax, and the left lung not larger than a shilling, while a hypertrophied heart compressed the other.

These autopsies, as a rule, have revealed unlooked-for conditions, such as effusions into the serous cavities of the thorax and abdomen, endocarditis, with gritty deposits upon the free edges of both the tricuspid and mitral valves, old pleuritic effusions and overdistended bladder; two quarts of urine having been drawn in at least one instance. One case of fœtal fatty degeneration is recorded which neither skin, muscle nor bone could bear traction. Suppuration of the thymus gland has been detected, as well as the evidences of meconium in the air-passages and the stomach.

Atelectasis pulmonum is a frequently-assigned cause of these misadventures, while one umbilical hernia has been demonstrated to contain within its sac the liver and almost all the intestines.

Death in one case was compassed within five days after birth by the sloughing away of the deciduous membrane at the root of the umbilical cord, and exposure of the liver, which formed a portion of the tumor.

The condition of the brain, however, explains by far the greater number of cases; for here, still accepting Elliott as authority, we find intra-cranial effusions, serous in character, and apoplectic clots varying in bulk from those of the size of a small pea to those occupying entire hemispheres. These cases tend to throw light upon those mysterious deaths loosely attributed to eclampsia, occurring during the sleep of the mother, and some of those in which the mother may be haunted by the spectre of having unconsciously overlaid her offspring. Here, what comfort might not an autopsy bring?

In our present effort we have pointed out some of the more salient landmarks, purposely avoiding the fruitful theme of abnormal presentations and mal adjusted diameters. The kindred matter of resuscitation cannot claim our attention, because our subject sufficiently sets forth our intention to discuss the etiology, and this, moreover, we have attempted only in a very sketchy way.

Our main desire has, however, been accomplished, viz., that of adding to our own knowledge through the impetus of a definite aim, and in verification of the trite axiom, "*Discimus docendo;*" so that in conclusion we cannot forego the temptation of perhaps misapplying the scriptural injunction, "Go thou and do likewise."

## ARTICLE III.—TWO CASES OF TAIT'S OPERATION. By P. F. CHAMBERS, M.D., Assistant Surgeon to the Woman's Hospital, New York.

Though Tait's operation for the removal of the ovaries and tubes is now an accepted procedure, nevertheless, like every other advance in surgery, it is in no way impaired, but, on the contrary, substantiated by repeated resort to it.

On the 17th of January last, with Dr. H. D. Nicoll and the members of the house staff as my assistants, I was allowed, through the kindness of Dr. T. Gaillard Thomas, to perform, in his stead, the two under-noted operations.

Miss B., the first patient, was admitted to Dr. Thomas's service in the Woman's Hospital on the 13th of December last, and gave the following history: Single, 33 years of age, and sick for seven years. Complained of constant severe pain in back and both sides of pelvis, dysmenorrhœa and nervousness. On examination per vaginam, both ovaries were found to be slightly enlarged and very sensitive. After a month's treatment of hot vaginal douches, rest, and applications of iodine to the pelvic roof, she was no better, but begged for the operation, which was finally decided upon. She was prepared for the operation, and, being etherized, an incision of three inches was first made through the skin in the median line, midway between the umbilicus and the pubes, but on account of the exceedingly thick adipose tissue the incision had to be extended by at least one and one-half inches. The peritoneum, then reached and picked up by a tenaculum, was cut through with a pair of scissors, and, the opening being made large enough, the left hand was passed into the abdominal cavity, and the uterus easily touched. With the uterus as a guide, a finger was passed on each side of the broad ligament, and quickly slipped along until the left ovary was found. It was discovered to be cystic, and of the size of a hen's egg. In lifting it up the cyst unfortunately burst, and, in consequence, the demonstration to the gentlemen present was not so satisfactory as I had wished. After bringing the ovary up to the abdominal opening, a silk ligature was passed, by means of a Peaslee's needle, through the broad ligament, near the uterus, and having been firmly ligated, the ovary and tube were removed, and the stump dropped back. This manœuvre was repeated upon the right side. The ovary was found, not cystic, but firmly bound down, and was with great difficulty removed from its position. The abdominal opening was then closed with deep silver-wire sutures, dressings of iodoform gauze applied, and the patient put to bed.

Mrs. S. was admitted into the Hospital December 12th. History: Married, 35 years of age; complained of severe pain in right side of pelvis; very weak and nervous, and gave an account of repeated attacks of localized peritonitis. On examination, the left ovary could not be found, but the right ovary and tube were distinctly felt to be enlarged and exceedingly sensitive, the slightest pressure causing the most excruciating pain. She had been ill for years, and, having spent her all in trying to get well, received the suggestion of an operation for the removal of the ovary with delight.

Immediately after the operation on Miss B., I proceeded to perform the operation on her in a similar manner. The left ovary, being found atrophied and firmly bound down, was not removed; but upon removing the right a cyst, somewhat longer than that found in the first case, presented itself, and was successfully removed, along with the ovary, without bursting. It proved to be an enlarged tube, and was filled with an aqueous fluid.

As in the first operation, the stump was dropped back, and the abdominal cavity thoroughly sponged out, so as to remove any blood that might have entered it. Owing to the exceedingly thick abdominal wall in the case of Miss B. the peritoneum could not be taken up separately, but was caught up by the deep silver-wire sutures; but in this second operation, before closing the external wound the peritoneum was caught up and the opening in it first closed with catgut before the silver wire sutures were passed. The wire sutures were then passed, going just down to the peritoneum, but not through it. The same iodoform dressings were applied. The subsequent history of both cases was uneventful. For the first week they were sustained solely by rectal enemata. Pain was subdued by morphia and liquor opii, and the temperature, which in the case of both patients reached its maximum, 102, the day after the operation, was controlled by the use of the ice coil. On the tenth day the sutures were removed and union found to be perfect.

The report furnished by Dr. H. C. Coe, the curator of the hospital, after an examination of the specimens sent him, is as follows:

1. *Miss B.*—Two ovaries and one tube. Both ovaries show increase of the fibrous stroma, with thickening of the capsules, resulting from chronic ovaritis. One ovary is cystic; the corresponding tube is normal.

2. *Mrs. S.*—Ovary and tube. The ovary is small, and shows hypertrophy of the fibrous stroma, without marked cystic degeneration.

The tube is as large as a small pear, and presents a regular enlargement from the uterine towards the distal extremity. The exterior is smooth, and shows no evidences of adhesions. The walls of the tube are so thin that when held in front of a light the tumor appears translucent. A probe may be passed through the cut end of the tube into the cyst, and by gentle pressure several drops of clear, watery fluid can be pressed out. On microscopical examination this is found to contain numbers of ciliated epithelial cells, but no pus.

Closer examination of the tumor shows that at the site of the distal opening of the tube there is a distinct white cicatrix, resulting from a probable inflammatory process, which led to obliteration of the opening. No trace of the fimbriæ remains. The condition is one of pure hydrosalpinx, not due to parametritic inflammation, but to a strictly localized process, the cause of which is unknown. While the fluid could not have escaped from the distal end of the tube, there is no evidence that it could not have been discharged into the uterine cavity under sufficient pressure. An interesting point in the case is the presence of ciliated epithelium in the contents of the cyst. These I have never failed to find in pure hydrosalpinx, unless the inflammation has been so chronic as to entirely destroy or alter the lining mucous membrane. Dr. Skene, of Brooklyn, also Dr. Ferguson, recently called attention to the importance of ciliated epithelia in connection with the diagnostic puncture of small cysts of the pelvis.—H. C. Coe, M.D.

## ARTICLE IV.—ROUTINE PRACTICE.* By JAMES F. RASCOE, M.D.

At the last meeting of the society Dr. J. W. Crenshaw read an essay on "The Importance of a Correct Diagnosis," in which he contrasts the difference between minutely investigating, correctly diagnosing and properly prescribing, and the off-hand style of grouping symptoms and giving medicine at random. The next thing to this indolent and careless way of diagnosing that deserves our condemnation is routine practice.

The best definition we can give to the term is the prescribing of a remedy, or combination of remedies, in a given class of diseases, without proper regard to diathesis, physical phenomena, or other conditions. With this practice is often associated the too ready adoption of other men's views.

To illustrate: Here may be two children of equal ages affected with the same disease. One, however, is a stoutly-built, robust, vigorous boy; the other a flaxen-haired, blue-eyed girl, with delicate parents. Now the routinist would prescribe the same medicine in the same quantity, and exactly the same general treatment for both. Take another imaginary case. Here is a young man in the prime of early manhood, full-habited and plethoric, and with all his vital powers in a condition of the highest activity. From a sudden exposure he contracts pneumonia, the attack being characterized by a strong, bounding pulse, throbbing carotids, flushed features, and all the indications of high febrile action. On the other hand, suppose an old man, feeble from his age, who has had a long siege of chills and fever, lasting perhaps for years. He has an enlarged spleen, an engorged liver, pale countenance, feeble pulse, and other symptoms denoting profound debility. Now let him have pneumonia. Not even the routinist would suppose for a moment that these two cases demanded the same treatment. In citing them I simply wish to make emphatic by contrast the importance of discriminating.

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* Read at a meeting of the Trigg Co., Ky., Medical Society.

Again, you have all, no doubt, noticed the difference between the races as regards the tolerance of medicines. The same amount of mercury that may be necessary to stimulate to a healthy action the secretions of a white man will ptyalize a negro. An opiate that will simply secure a comfortable night's rest for a white man will often narcotize the negro.

While we can hardly conceive a physician who would be guilty of such an egregious error as treating alike cases with such different characteristics, the routinist does in thousands of instances fail to make nice distinctions, such as ought to guide his management of them. As you well know, patients often apply to us who are suffering from similar affections, but present such different physical conditions as to require nearly opposite courses of treatment.

Now let me briefly call your attention to the other fault of the routinist, the too ready adoption of other men's views. Charles Dickens ridiculed Americans for their toadyism, and in trying to find out whether or not he was just in his criticism I have been greatly chagrined as well as amused to find that what he said of us was but too true. This feeling is, unfortunately, not confined to the legal and theological professions. A few years ago the medical world was as completely divided as the political ever was. The two parties were the Conservatives and the Heroics, and neither did Bell, Douglass nor Breckenridge ever have more zealous advocates of their respective causes than had Wood, Bennett and others in our profession. The curse of the profession to-day is the tendency to adopt other men's views instead of thinking for oneself. It does not seem to matter with some physicians how their patients are getting along if they can prove by some medical journal that they have them on "the very latest treatment." I do not believe in regarding *any one* as infallible. Modern research is continually upsetting old theories, and things that were once regarded as established truths are from time to time proven to have been the merest of myths. Life is short and art is long, and errors are liable to obtain for awhile in every department of learning. A few months ago Listerism was advocated everywhere; now we find it, where not wholly abandoned, greatly modified. Our great lights do such and such things this year, and discontinue them the next; so one can readily see in what a predicament that weathercock, the routinist, is often placed.

Next let us examine the causes, and seek for the remedy of routinism.

There are doubtless many causes, but two of them deserve to be noticed especially.

The first is, that men find their way into our profession who are unfit for it. Whatever be the motive that induces them to enter it, they have no zeal or professional pride whatever, and, of course, they are drones. The next is the low standard of scholarship required to enter our colleges, and the short time required for study before graduation. In the first place, no physician should ever encourage any one to read medicine who has not an active mind, a good constitution, and an honest heart. The candidate for medical honors should show something of the scholar and the gentleman about him, and manifest a true zeal for the profession as well as a laudable ambition for personal success. If a man is going to be an invalid, sickly, feverish and irritable, this is no place for him. We need hardy men, who can brave the inclemency of the weather, who can lose sleep, stand fatigue, and through it all maintain bright faces and cheery voices. We do not want any with horse-swapping proclivities predominating, nor vulgar or dishonest men; but rather refined and conscientious gentlemen, who will have a just appreciation of the sacredness and responsibility of their office, and will demonstrate by their lives that ours is a noble and humane calling. We hold that a student to enter a medical college should have a good moral character and a liberal scholastic education. Without the latter he cannot properly appreciate what lies before him. The practice of medicine is a science, and the idea of taking a boy from the ordinary vocations of life, from the plow or counter, with only a rudimentary education, and expecting him to master all the regular and collateral or special branches of medicine in two years is absurd. The turning out of such a doctor is a metamorphosis which for rapidity is only equalled by the conversion of a caterpillar into a butterfly.

How long, then, it may be asked, should a young man be kept at college? This must depend entirely upon his proficiency. It might be for three, five or seven years, or, if necessary, until he died of old age, rather than let him come out licensed to slaughter *ad libitum* and disgrace the profession to which he is supposed to belong.

In a recent number of Gaillard's Journal an account is given of a Homœopath who had to hold a post-mortem in order to find out whether his patient had had pneumonia or typhoid fever. I am willing to grant that there are men in the profession, who are an honor to it, who, perhaps, were never in a medical college; but these men have had a genuine zeal for it, and by long years of hard study have grown rich in medical knowledge. They would have made their mark anywhere, because they were of the right "stuff." There is one thing the world needs to get rid of, and that is the idea that colleges can make lawyers, clergymen or doctors. They are simply great auxiliaries. It requires labor and hard study to prepare a man properly for any of the professions, and, in addition, he must possess a special aptitude for his calling.

When men read medicine and have no taste for it, other things which they do like will soon divide their attention, and these men, rather than study and digest knowledge for themselves, will, with an easy conscience, adopt other men's views;

preferring to glide along in some one else's boat rather than use the oars themselves.

Let a man lack a knowledge of the great fundamental principles underlying the healing art, and nine times out of ten he will be a routinist. If I am correctly informed, in Germany they require a student to study medicine seven years before he can graduate or is entitled to a diploma. I think it would be well if our colleges would adopt the same rule; then none would undertake the study of medicine who had not a genuine zeal for it, and we would in like manner kill out those spurious institutions where the routine larvæ are hatched which are such a disgrace to our country.

In conclusion, gentlemen, when we come to reflect that although we are living in the 19th century there are comparatively very few diseases that we can actually cure or cut short; that new theories and new medicines are continually springing up, to flourish a short time and then die; we should endeavor to thoroughly master the great first principles that underlie our science: to examine thoroughly every patient, and try to recognize the real pathological condition, and prescribe for every case on its own individual merits.

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## ORIGINAL TRANSLATIONS.

### TOXÆMIÆ CAUSED BY THE ABSORPTION OR RESORPTION OF PUTRID POISONS. By PAUL LE GENDRE. Translated from *L'Union Médicale* by H. McS. GAMBLE, M.D., Moorefield, West Va.

"The action of inferior organisms in the course of the decomposition of azotized matters produces toxic substances more or less active. These putrid poisons or ptomaines exist not only in the putrefactions which are produced outside of the human body, they exist normally in the digestive canal, and even in the blood. They play an important rôle in pathology. There is reason to attribute to them: 1. Putrid intoxications, in which the poisons formed outside of the human body enter into the organism by way of the digestive canal or of a wound. 2. Putrid auto-toxæmiæ, due to the action of ptomaines formed in the digestive canal. . . . ."

Such are the conclusions of an important work which Dr. A. Netler, clinical chief of the Faculty, published last year in the *Archives de Médecine*, under the following title: "Chemical Poisons which Appear in Organic Matters in course of Decomposition, and Diseases which they may Provoke."

The rare erudition of our friend has enabled him to make a work as complete as possible upon this subject, so vast that the analysis of it alone would exceed the limits of our modest articles. We will confine ourselves, then, leaving aside the historical aspect of the question, to recording concisely the results obtained, which alone are of interest to our readers, for the most part practitioners; we will remain, in acting thus, faithful once more to the rôle which seems to us more suitable to the medical press.

The editors of journals which appear at short intervals ought, we firmly believe, to have a different ideal from that of writers who contribute to monthly or quarterly reviews. The journalist, if he wishes to be useful to his readers, should imitate, to speak reverently, the dog of which Master Alcofribas Nasier speaks, in his prologue to the very horrific life of the great Gargantua. "The dog, the most philosophical animal in the world, according to Galen, if he finds a marrow-bone, hastens to crush it in order to get the marrow, because the marrow is an aliment elaborated to the perfection of nature." From every important work the journalist ought to extract the marrow. Thus are we going to do with the memoir of Netler, and it is not every day that we find such a rich "marrow-bone."

### I.—PUTRID TOXÆMIÆ OF EXTERNAL ORIGIN.

It results clearly from the works undertaken upon the nature of the products of putrefaction—from those of our compatriot Gaspard, too unjustly forgotten, to those of Stich, Bergmann and Panum—that the decomposition of organic matters gives rise to certain toxic substances, which, although illy-defined chemically, are nevertheless dangerous, as much so as the most energetic chemical poisons, to those animals into the organism of which they are introduced. But man is liable to be poisoned by some of these putrid poisons, which enter his body most frequently by the digestive canal; sometimes by solution of the continuity of the external integument.

Among our neighbors across the Rhine, impassioned consumers of sausage, the ingestion of this article of diet, if it has undergone certain putrid alterations, often determines toxic symptoms, which have been catalogued in nosology under the name of *bottulism* or *allantiasis.*

According to the description which Muller has given of it, this poisoning comprises at first a stadium of irritation, which makes its appearance about eighteen hours after the ingestion of the spoiled sausage; general malaise, epigastric pain and weight, anorexia, then nausea and vomiting; painful distention of the abdomen, constipation from the start, or preceded by diarrhœa; cephalalgia, extraordinary dryness of the mouth and throat.

The second or third day brings the paralytic stadium, vertigo, uncertain gait; amblyopia, diplopia, dilatation of the pupils, which are insensible to the light, ptosis; laborious respiration, then paroxysmal and hoarse cough; finally, aphonia. Increasing dysphagia, suppression of the secretions, with the exception of the urine; abolition of the cutaneous sensibility, paralysis of the limbs and of the tongue; slowing of the pulse and heart; coldness. Death, after several attacks of lipothymia, or sometimes after convulsions, supervenes in a third of the cases before the tenth day.

The patient may recover after one or two weeks, or more frequently after a period of extreme debility, which may continue for weeks and months.

In those cases in which autopsies have been held no lesions have been found other than multiple visceral congestions and an irritative condition of the digestive canal.

Thus, in badly smoked sausages is probably developed, by the putrid decomposition of the central portion the least exposed to the action of heat, a poison which arrests the secretions, modifies the state of the pupil, causes adynamia and chill, acts upon the heart and the pulse; thus resembling in many points both atrophine and hyoscyamine.

This poison presents the greatest likeness to the cadavaric alkaloids extracted from putrefied meats by Zulzer and Sonnenschein, and the ptomaines studied from a chemical and physiological point of view by Selmi; from a medico-legal point of view by MM. Brouardel and Boutmy.

In 1878 MM. Brouardel and Boutmy, having had to investigate the cause of the death of a woman who had rapidly succumbed after having eaten of spoiled stuffed goose, extracted from the remains of this goose a liquid alkaline base very similar to conicine. They likewise found in the viscera of the woman an alkaloid which determined in frogs the same toxic symptoms which the ptomaine extracted from the goose had produced, and presented the same clinical properties, so they were enabled legitimately to conclude that death was the result of the absorption of a ptomaine.

In all the known accounts of poisoning by the ingestion of spoiled meats we see supervening, after a few hours, digestive troubles, vomiting and abundant fetid, mucous and bloody diarrhœa. At the same time there exists a great prostration, general trembling, and sometimes a more or less intense febrile movement.

Recovery is generally rapid. If death supervenes, the intestine is found red, ecchymotic, the follicles, both closed and agminated, tumefied. These symptoms and these lesions recall in all respects the experimental results which the aqueous putrid poison of Panum produced—the sepsine of Bergmann—and differ from the symptoms which result from poisoning by the sausages, which tend to prove the plurality of the putrid poisons admitted by Panum.

By the side of the preceding intoxications are placed some rarer and less precise facts, such as the symptoms determined by the ingestion of *salted fish*, studied by the Russian physicians at Riga and at Astrakan, or of *fish preserved in vinegar* (Schreiber); poisoning by *pickle*, which has been the subject of several discussions at the Academy of Medicine, although it has been impossible to establish any agreement upon the question whether the pickle is toxic through its salts (Goubaux), through a special poison (Reynal), or through the presence of inferior organism (Davaine); finally, the milder disorders consecutive to the use of *spoiled cheese.*

The putrid intoxications may also reach us through an abrasion of the integument, if it is true that the disorders produced by defective wounds are due to the intoxication into our organisms of chemical poisons developed by putrefaction in the fluids of cadavers either fresh or advanced in decomposition: a complex question and one not yet resolved.

### II.—PUTRID AUTC-TOXÆMIÆ.

If it is interesting to know the existence and the aspect of putrid intoxication of external origin, we may say that that of the auto-intoxications or auto-toxæmiæ of intestinal origin presents a still more considerable interest by reason of the pathogenic deductions which flow from it, and of the therapeutical applications to which it leads.

In the work of M. Netler are found collected all the proofs which are of the greatest weight in the demonstration of the following points :

"1. That a part of the azotized matters contained in the intestine is subjected to conditions identical with those of their decomposition outside of the organism, and that the products of these fermentations are found in the stools.

"2. That these products pass into the blood, at least in part ; that they are subsequently separated by the kidneys, and that their proportion in the urine may furnish useful information as to the state of the intestinal putrefaction.

"3. That all the products which have entered do not reach the kidneys, and that certain organs are normally charged with the duty of destroying the most hurtful.

"4. That under certain circumstances these injurious products of intestinal fermentation are formed or absorbed in too large quantity, destroyed or eliminated in insufficient quantity, and may entail more or less serious disturbances to the health."

It is known that there exists in the normal state a large quantity of inferior organisms in the digestive canal, into which they are introduced by the air, water and food. It is they which, immediately after death, triumphing over the impassable barrier that a living intestinal wall opposed to them, migrate into the peritoneum and the abdominal viscera, to become there the agents of a rapid putrefaction.

During life, all this world of micro-organisms—from the microscopic animalcules that Lowenhœck had already discovered in his stools, whenever they were liquid or of the appearance of pea soup, to the four species of intestinal microbes admitted by Nothnagel, bacteria, micrococci, bacilli and mucidinia—is incessantly at work for the decomposition of the albuminoid matters contained in the intestines.

Chemical analysis also discloses in the contents of the intestine all the organisms that develope putrefaction, Besides the gases, hydrogen, azote, sulphydric acid and carbonic, and the fatty acids (butyric, valerianic,), appear azotized compounds (leucine, tyrosine, glycocolle, indol, skatol), aromatic products (phenol, cresol) and substances analogous to the alkaloids, some fixed, others volatile.

Some of these products may doubtless proceed from some other source than that of putrefaction. Thus, tyrosine and leucine may result as a part of the action of the soluble ferment of the pancreas, trypsine. Glycocol and its derivations are poured into the intestine with the bile. Cholesterine and its derivative, stercorine, excretine and excretoleic acid also have a biliary origin.

But indol, phenol, skatol and the alkaloids are substances the presence of which in the intestine attests that putrefactions are taking place therein. The azotized substance, the presence of which in the contents of the duodenum Tiedemann and Gmelin mentioned in 1826, characterizing it by its property of assuming a peach-bloom rose color upon the addition of chlorinated water, and which Beyer obtained first by the dehydration of indigo—indol—exists normally in the contents of the bowels, and can only be attributed to the action of the bacteria of the digestive canal.

Skatol is a nearly-allied product in its composition, which is also found in the fæces of man and in the products of putrefaction.

Phenol, which Baumann first found in the stools, is an aromatic product derived from the putrid decomposition of the quaternary matters.

M. Bouchard, in 1882, was the first to discover in the evacuations from the bowels the presence of multiple toxic alkaloids analogous to ptomaines; besides, last year he informed us that the fæcal matter is eminently toxic in the dialyzable portion of it and that, apart from the fatty matters, the coloring and volatile matters and the biliary acids, it is capable of determining couvulsions and death in a rabbit, in the proportion of 17 grammes to the kilogramme of weight of the animal.

The products of intestinal putrefaction pass into the blood. That is demonstrated, not by analysis of the blood itself, which contains them in too feeble a quantity for it to be possible to detect them therein, but by examination of the urine.

In fact, besides that through the latter are eliminated in a regular manner the formic and acetic acids, which are derived from the intestinal fermentations, that we find therein sometimes sulphuretted hydrogen, butyric acid, etc., we find in the urine, in variable quantity, but nearly uniformly, the substances which we have recognized in the intestine as the result of the putrefaction of the albuminoids.

Thus it is certain that the urinary indican expresses the indol absorbed in the intestine and oxidized by its passage into the blood. The phenol passes into urine under the form of phenyl-sulphuric acid, and the other aromatic products, skatol, cresol, show themselves therein also in the state of sulpho-conjugate combinations, the sulphuric acid which is then united with them including the sulphur of the albumen, which is not represented in the other products resulting from the intestinal putrefactions.

Finally, there exist in the urine, normal as well as pathological, certain alkaloids which, as M. Bouchard has demonstrated, are identical with those produced by parasitic fermentations in the intestine. It is these alcaloids to which MM. Pouchet and A. Gautier assign another origin: the disassimilation of the tissues. M. Gautier denominates them *leucomaines.* The fabrication of alkaloids is a function of every living cell, animal as well as vegetable, says M. Gautier, who, we believe, has a synthetical conception which is most certainly a bold one in regard to the chemical composition of albuminoid matters. Hydrocyanic acid enters into the chemical framework of the albumoids, and should be eliminated normally in the form of urea (cyanate of ammonia) in consequence of the waste of the tissues. Non-eliminated, the cyanic compounds would become the cause of toxic effects in the organism.

## III.

Whatever may be the theories of transcendental chemistry, the study in the urine of the products resulting from the intestinal putrefaction may supply useful diagnostic information, according as such or such of these products increases or diminishes.

The quantitative variations of indican have been the subject of important labors. Gubler and M. Albert Robin have insisted upon the presence of the blue color in the urine of patients attacked with typhoid fever.

In an animal, the small intestine of which was ligated, and which was fed upon meat, the indican increased progressively for three days from four to sixty milligrammes to the litre of urine. The course of the intestinal contents being re-established, the indican returned to the normal standard. The result is not the same if the large intestine is tied, except in case a peritonitis consecutive to the operation comes to paralyze the convolutions of the small intestine (Jaffé, 1877). Clinical investigation shows that the indican increases in peritonitis and in intestinal invagination, so that surgeons have proposed the examination of the proportion of indican as an element of diagnosis of the seat of the occlusion.

The increase of the indican in chronic diseases attended with inanition has been met with, and we may conclude that its presence indicates a more active decomposition of the azotized matters under the influence of the intestinal ferments. The indican has been sometimes found augmented in anæmia, chlorosis, pernicious anæmia (Senator); but in those cases of anæmia accompanied by digestive disorders, or by an intense wasting (disassimilation) of the tissues by inanition, which furnishes an excess of azotized products to the work of intestinal decomposition.

The study of phenol in the urine has shown (Salkowski, 1878) that it increases in peritonitis with intestinal strangulation, ileus, in cases of constipation in man, and above all after ligation of the bowel in the dog, in dilatation of the stomach, and, in a general way, every time that there is anywhere in the economy a putrefaction (empyæmia, diphtheria, gangrenous pneumonia, myelopathic slough).

Teucine and tyrosine are less important considered as products of putrefaction, since they have in great part a biliary origin, appear in the urine of grave cases of icterus, and in the diseases of the digestive canal and its annexes.

Selmi, who has found ptomaines in the urine, believes that their presence is always associated with a pathological state, that they appear in the infectious diseases, in those in which there takes place some internal sphacelus, and that they result from the cellular disintegration as well as from the action of bacteria.

These *pathoamines*, as he calls them—which he has found in the urine of general paralytics, of typhoid subjects, of patients suffering with infectious pneumonia, poisoning by phosphorus, tetanus—recall by different odors, some nicotine, others conine, propylamine or ammonia. Several among them have been found in the same urine, and are toxic. The urine also constantly contains, according to Selmi, a volatile phosphoretted substance analogous to that which is developed in the putrefaction of albumen.

Finally, M. Bouchard, who, after having supposed that the alkaloids existed in the urine only in a pathological state, has recognized their normal presence therein, has shown that these urinary alkaloids increase in infectious diseases, and every time that, from any cause whatever, the intestinal putrefaction is more active, or that its products cease to be eliminated by way of the rectum.

Thus, to use the expression of Stich, each man "carries in his intestine, in a state of health, putrid substances which would suffice to kill thousands of his fellow-men if they were injected into their blood." How then can we reconcile this very correct proposition with the preservation of the state of health? In reply to this question several hypotheses have been suggested.

The influence of the products of secretion of the digestive canal, as long as they remain normal, neutralizes in part the toxic products. The putrefactive action of the solid parasitic ferments cannot prevail in the normal state against the antiputrid action of the soluble digestive ferments. The gastric juice is an excellent antiseptic (Spallanzani). The bile is also endowed with antiseptic properties. The phenic acid itself, which results from the intestinal decompositions, performs an antiseptic rôle.

The hardening of the fæcal matters isolates in part the toxic products from the absorbing surface of the intestine; this explains how the urinary alkaloids increase above all in cases of liquid constipation, if we may so speak; of retention of soft and pasty matters (Bouchard).

Besides, "the injurious substances which have entered the blood are separated from it by the kidneys and pass into the urine. Absorption and secretion going on upon a par, the quantity of poison present in the blood is always too feeble to produce disorders. It would not be so if the quantity of poison resorbed in the twenty-four hours should enter at once into the circulatory torrent (Netler)."

The poisons of putrid origin absorbed are perhaps, in the course of absorption, transformed by the white globules of the blood (Hoffmeister), which, according to the same author, might be charged normally with the duty of transforming the peptones into an albumen.

Stich had admitted that the putrid poisons are neutralized during their passage through the membranes of the intestine.

But there is above all an *agent of neutralization of the putrid poisons* which Schiff has brought to light, and which ought to be taken into great consideration; it is the *hepatic gland.*

It is known that the liver arrests and stores up many of the mineral poisons, as phosphorus, lead, alcohol; it fixes and retains also vegetable alkaloids, nicotine, strychnine, morphine, quinine (Heeger). But Schiff has demonstrated also that the liver, a vigilant sentinel placed upon the track of the routes of intestinal absorption, arrests on the way, confiscates and neutralizes to its utmost all animal poisons.

The resorption and passage into the blood of putrid poisons introduced or originated in the intestine may, we have said, engender acute or chronic disorders; some well known and accepted for some time past, others upon the reality of which light has not yet been shed in a very positive manner.

About 1883, in his important work upon the intestinal septicæmiæ, M. Humbert had insisted upon the necessity of assigning a rôle to the production of septic matters in the intestine and their penetration into the economy in the grave general disorders which accompany the partial or total suppression of the alvine evacuations. He recognized two classes of cases, the one comprising the septicæmiæ *without retention* (typhoid fever, suppurations of the mouth and of the pharynx; scorbutus, perhaps), the other the septicæmiæ *with retention* (strangulated hernia, intestinal occlusion, constipation, and even gastric disorder). The septicæmiæ studied by M. Humbert are, so to speak, the type of the acute putrid toxæmiæ.

But it is, above all, to the recent views of M. Bouchard upon the pathogenic rôle of intestinal resorption of the products of putrefaction that it is important to direct our attention, for it is to a sort of chronic toxæmia that the facts relate to which M. Bouchard has called attention, especially in his researches upon dilatation of the stomach.

If the series of phenomena which we have exposed above is accepted as real—constant production, but in variable quantity, of the putrid poisons in the intestine, expulsion of one part of them by the rectal route, passage of another part into the blood by the way of absorption, neutralization by the liver of a part of the products absorbed, elimination of the rest by the kidneys—it could not be denied that putrid auto-toxæmia might be the result of four orders of causes.

The kidneys may cease to eliminate the toxic products taken up in the intestine. This condition is found realized in the renal or general affections which suppress the urinary function; the failure of the kidneys entails, then, the production of the clinical syndrome designated under the name of *urœmia* (comatose or convulsive state; hypothermy). This condition would deserve rather the name of *stercorœmia*, says M. Bouchard, for a large share in its genesis ought to be assigned to the retention of the alkaloids of stercoral origin.

However, the question remains unsettled, since the more recent researches of M. Bouchard upon the toxicity of the urine (*Soc. de Biol.*, 1884) have shown that all the constituant parts of normal urine are toxic in different degrees and in different ways, the variety of these toxic products being sufficient, perhaps, to explain the polymorphism of the clinical forms of uræmia.

The liver may cease to neutralize the toxic products of intestinal origin.

The insufficiency of the hepatic gland, such as it is found constituted in grave icterus by acute atrophy of the liver, the terminal acholia or cholæmia of hepatic degenerations entails the production of symptoms which seem to betray a toxæmia (intellectual torpor or delirium, adynamia, sometimes convulsions), and which would be explained by the suppression of the neutralizing action normally exercised by the liver upon putrid poisons.

The absorption of the putrid poisons in the intestine and their passage into the blood may be effected in excess.

These two unfavorable conditions would be found realized by the total suppression of the alvine evacuations (intestinal occlusion, and even simple prolonged constipation). But, when the suppression is total and sudden, one would see manifested the symptoms of an acute toxæmia, such as we find associated in the clinical picture of intestinal occlusion, whilst the simple rarity of the evacuations would succeed in producing only the attenuated phenomena of a slight toxæmia which compose the cortège of certain gastric embarrassments.

M. Bouchard attributes to the influence of the intestinal poisons a certain number of symptoms considered heretofore by authors as reflex or sympathetic of the gastro-intestinal embarrassment.

"The fact, in appearance contradictory, of long constipations without serious disturbance of the health (and authentic examples are found in O'Beirn extending to months) is less difficult to explain than might be supposed at first sight, if we take into consideration both the habit of the organism and the rôle of the liver and of the kidneys. On the other hand, in constipation the stagnation of the fæcal matters takes place above all in the large intestine, and the products of putrefaction at the level of the latter are certainly less injurious than in the small intestine (Netler)."

The mucous disorders, called reflex or sympathetic, observed for a long time in certain dyspeptic states, are perhaps only toxic symptoms due to the exaggerated production of the intestinal fermentations, in consequence of derangements in the chemical operations of digestion. Even fever may be caused by the absorption of certain products of putrid fermentation, the fecal matters containing at the same time a pyretogenic poison and other poisons producing a hypothermic effect.

Certain choleriform diarrhœas, infantile cholera, cholera nostras, perhaps, depend upon putrid intestinal intoxication, as Hippocrates, Sydenham and Sauvages had suggested.

There are pathological conditions into which the four orders of causes, which we have dissociated above, may come into play simultaneously; they are the general infectious diseases with intestinal determination, as typhoid fever, in which the intestinal putridity is exaggerated, in which absorption of the toxic products is favored by the constantly fluid state of the alvine matters, and in which the neutralization, as well as the elimination of these resorbed products, is hindered by the prior performance of the functions of the hepatic and renal apparatuses. In this hypothesis it might be admitted that to the proper and specific symptoms of the primitive disease are added at a certain time some of the phenomena of putrid resorption and of auto-toxæmia—a precious therapeutical indication, to which we shall revert hereafter.

Finally, and with this we will close the exposition of the consequences that the resorption of intestinal poisons may engender, M. Bouchard has brought out, in his recent communications upon dilatation of the stomach, an important element in the pathogeny of the numerous consequences which he attributes to this morbid condition.

M. Bouchard remarks that dilatation of the stomach presents, as a whole, those conditions which are most favorable to chronic intoxication of the economy by putrid poisons, stagnation of alimentary matters incompletely digested, in the midst of which the solid parasitic ferments may exercise their putrefactive action with so much the more activity as the antiseptic power of the soluble digestive ferments is diminished; stagnation in the intestine of soft and partly fecal matters, from which absorption easily takes place. In spite of the elimination of the absorbed putrid poisons, which would be expelled by the most different routes, integument, mucous membranes, urinary apparatus, etc., as seems to attest the frequency of cutaneous affections, of relapsing bronchitis, of albuminuria, etc., in persons attacked with gastric dilatation, the constant penetration of these poisons into the economy, and their prolonged contact with the cells of the whole organism, would end in engendering a permanent disorder of nutrition, a sort of acquired diathesis.

It seems also to result from the investigations of our friend, J. Comby, that the dilatation of the stomach, so frequent among children, in consequence of the vicious alimentary hygiene which is too often imposed upon them, is one of the most active predisposing causes of rachitism.

## V.

The knowledge of the facts set forth above ought to lead to therapeutical measures that we cannot develope to-day, but which it is nevertheless proper to outline. The totality of the measures to be opposed to putrid toxæmiæ of intestinal origin may be characterized by the expression *intestinal antisepsy*, a vast and important chapter of that antiseptic medication, the study of which, ardently pursued at present by the surgeons, ought also to preoccupy physicians quite as much.

To expel as quickly as possible the toxic products introduced or developed in the digestive canal, to favor the elimination by the renal apparatus of those which have already entered into the economy, to oppose above all the stagnation of putrescible matters in the intestine and to oppose the putrefactive action of the parasitic micro-organisms always present in the digestive tract—such are the chief lines of the antiseptic medication applicable to the facts which now engage our attention.

Among these means, some have always been used by physicians. In one of his lectures upon clinical therapeutics, M. Dujardin-Beaumetz has remarked how contemporary researches upon the putrid fermentations of the intestine justify the infatuation of our fathers for purgative medication. "Replace," said he, "the words peccant humors, atrabiliary humors, by those of micro-organisms, of alkaloids of putrefaction, and you will comprehend much better the language of the physicians of the time of Molière, whom the immortal comedian has described in such exact terms in the *Malade Imaginaire*. It is no longer to hasten to drive out the bad humors of M. Orgon that Fleurant would employ the numerous apozems prescribed by Purgon, but to expel, we say to-day, the putrid elements which are developed in the intestine."

Certain remarkable successes of the evacuating method, that is to say, of purgative and diuretic medications in certain diseases, empirically observed from all time, find their explanation in contemporary discoveries.

Thus, the so favorable action of purgatives against uræmic disorders, is it not illuminated by an entirely new light if it is admitted that there are above all stercoræmic symptoms?

We understand better than ever to-day their utility in dothienteritis, and in all diseases in which there exists a stagnation of putrid and semi-liquid fæcal matters.

We understand also the excellent results of the washing out of the stomach in certain forms of dyspepsia. But it is more especially towards the neutralization of the putrid fermentations in the intestine that contemporary therapeutics should direct its efforts, in order to institute a prophylaxis against the acute or chronic toxæmiæ of intestinal origin.

To cite only a few of the means of which the physician of the present day makes use in order to secure this result, we will remind you that M. Bouchard prescribes in typhoid fever a mixture of charcoal and iodoform, which, in sufficient quantity, succeeds in perfectly disinfecting the stools, a measure which he recommends also in cases of dyspepsia with putridity and in dilatation of the stomach.

M. Dujardin-Beaumetz has utilized the antiseptic properties of resorcine (*Thèse de Callais*).

One may find in boric acid, phenic acid, salicylic acid and the salts of mercury, in very small doses, agents of a variable antiseptic power, and of more convenient application to the practicing of intestinal antisepsis. We will also mention the hyposulphites so much vaunted by Polli.

Among the agents of antiseptic medication there are some, although of very remarkable antiseptic power in vitro, which may be injurious to the patient by their own toxic action or their local irritating properties, and which for this reason ought to be discarded from therapeutics.

Our colleague and friend, M. Sapelier, is pursuing at this time, under the distinguished direction of our common master, M. Dujardin-Beaumetz, some exceedingly interesting clinical and experimental researches upon the value of sulphuret of carbon, from the standpoint of intestinal antiseptics, and, without wishing to commit any indiscretion, we may say that remarkable results have been obtained by the employment of *sulpho-carbonated water* (*eau sulfocarbonée*)—that is to say, water holding in solution sulphuret of carbon, against putrid diarrhœas.

" The sulpho-carbonated water is thus formulated :

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|---|---|
| ℞. "Sulphuret of carbon | 25 grammes. |
| Water | 500 " |
| Essence of mint | xxx. drops. |

"To be put into a flask of the capacity of 700 centigrammes; shake, and let it settle. You give eight, ten, twelve tablespoonfuls of this water per diem, taking care to put each spoonful in half a glass of *eau rougie* or of milk; direct the patient to replace the water in the bottle in proportion as he takes it (*Bulletin de Thérapeutique*, 1885, No. 1)."

The ideal medicament applicable to intestinal antisepsis has not yet perhaps been found ; it is to discovering it that all our efforts should be directed.

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GERMAN VASELINE.—According to Oswald Saalberg, in Zwickau (*American Druggist*), all the vaseline manufactured in Germany is an artificial product, being composed of eighty to eighty-five per cent. of mineral oil (liquid paraffin) and fifteen to twenty per cent. of ceresin. The color of the product, of course, depends on the color of the several constituents.

# RÉSUMÉ OF ORIGINAL ARTICLES

## IN OTHER JOURNALS.

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Malignant Endocarditis.—In the first of his Gulstonian lectures, delivered at the Royal College of Physicians, and published in the *Lancet* of March 7, Dr. William Osler, Professor of Clinical Medicine at the University of Pennsylvania, says: The term *ulcerative* has come into very general use to describe the grave form, and it expresses well an anatomical feature present in a large proportion of cases; but in others it is very inapplicable, as there may be no actual loss of substance, and no more destruction than occurs in the verrucose form; and, on the other hand, there may be great destruction and ulceration from causes of an entirely different nature. The numerous other terms employed, *septic, infectious, diphtheritic, mycosis endocardii, arterial pyœmia*, while each expressing some special feature, and so far suitable, have never come into very general use. On the whole, it seems to me that the names *simple* and *malignant*, which we use so often to separate the milder and severe forms of many diseases, might appropriately be employed in describing the cases of acute endocarditis: the *simple* being those with few or slight symptoms, and which run a favorable course; the *malignant* the cases with severe constitutional disturbance and extensive valve lesions, whether ulcerative or vegetative, the term being more clinical than anatomical.

Malignant endocarditis occurs under the following conditions: 1. As a primary disease of the lining membrane of the heart or its valves, either attacking persons in previous good health or more often attacking the debilitated and dissipated, or those with old valve lesions. 2. As a secondary affection in connection with many diseases, particularly rheumatic fever, pneumonia, scarlet fever, diphtheria, ague, etc. 3. As an associated condition in septic processes, traumatic or puerperal. We shall discuss first the anatomical characters, then the clinical features, and lastly the etiological and pathological relations.

The lesions of malignant endocarditis are by no means uniform, and may be vegetative, ulcerative or suppurative; and these various forms may occur alone or in combination.

The combination of ulcerative and fungating outgrowths is perhaps the most common condition. The vegetations vary a good deal in appearance and consistence. Soft grayish-white masses with roughened friable surfaces, to which thin blood-clot adheres, are numerous; or there may be large cauliflower excrescences with deep jagged fissures; or, again, long pendulous, stalactitic masses. In the latter form we often see, as Dr. Moxon pointed out, the effects of friction, and such a long vegetation from an aortic cusp may produce by contact a whole series of smaller outgrowths along the ventricular wall. The pressure of the valves against each other and the action of the blood tend to loosen and break the vegetations, and one can sometimes see where masses have been torn off, either entire or by a gradual process of disintegration. Considering the force with which the valves come together, it is curious that the soft vegetations, occupying, as they generally do, the lines of closure, can resist the constant compression to which they are subjected.

*Histological characters.*—The study of a small fresh endocardial vegetation shows it to be made up of cells derived from the subendothelial layer, round and fusiform, which by their proliferation have produced a small nodular projection on the surface of the endocardium. Varying with the rapidity of the growth, the mass will present the characters of a soft granulation tissue or a tolerably firm fibrous outgrowth. Usually the round cells predominate, but there may be many elongated, spindle-formed cells, with three or four processes. What part the endothelium plays in this growth has not been determined. Tiny outgrowths may be seen in which the process appears to be entirely subendothelial, but usually before the mass attains any size the smooth surface is lost, and there is deposited upon it a cap of fibrine in the form of a granular, sometimes stratified material, of variable thickness. Though this resembles an ordinary coagulable exudation, it is probably deposited directly from the blood, and is of the nature of a thrombus. Upon and in this layer may be found, sometimes in large numbers, those remarkable little bodies which have so long been known, when collected together, as Schultze's granule masses, and which have of late become as prominent as the blood-plates of Bizzozero and the hæmatoblasts of Hayem. Occasionally they are very abundant, and I have seen soft warty vegetations composed (superficially) in great part of them.

The larger vegetations, more characteristic of malignant endocarditis, consist of a granular material composed of altered and dead tissue elements, fibrinous exudation, and colonies of micrococci ; the deeper parts present the appearance of a granulation tissue, while at the attachment in the valve there is always more or less infiltration and increase of the cell elements. The granular substance is structureless, and resembles diphtheritic exudation, the resemblance at times being so close that one can readily understand the application of the term " diphtheritic " to the inflammation. It may be distinctly laminated, and with a high power fine filaments can be seen, though usually the granules conceal all appearance of structure. Strands of translucent material may occur throughout the mass, as if portions had undergone a sort of hyaline transformation. In some instances this is very marked. Pale spheres filled with granules also occur, and may be very abundant. They have been described as colonies of micrococci, but some regard them as altered endothelial elements. I have seen them too numerous to be explained on this view. At the attachment of the vegetation there is a zone of tissue deeply infiltrated with leucocytes, and deeper still the tissue elements of the valve present an increase of nuclei and cells. The destruction of tissue appears to result in two ways : First, a gradual extension inwards of the necrotic process, doubtless induced by the micrococci ; secondly, the softening and separation of valve tissue caused by the rapid development of leucocytes at the base of the vegetation.

The micrococci are constant elements in the vegetations.

The local effects of the ulcerative changes are important. Perforation of a valve segment is extremely common, sometimes there is a clean-cut, punched-out hole, with scarcely any irregularity of the edges ; more frequently, however, there are great fungus vegetations which completely close and conceal the perforation. Erosion of the chordæ tendineæ is frequently met with, and an entire group passing to the papilla may be destroyed, the ends curled and encrusted with vegetations. Ulceration of the heart muscle leading to perforation of the septum or of the wall of a chamber is much less frequent occurrence.

In a few instances the aorta is involved with the heart. The most frequent site is the sinuses of Valsalva, the vegetations growing through the segments spread on to the aortic wall, or it is affected by friction. It is rare for the vegetations to extend into the arch.

Of associated pathological changes we have, in the first place, those connected with some primary disease, to which the endocarditis is in the majority of cases secondary. Thus, in the endocarditis of septic processes there is the local lesion, a suppurating wound, a phlegmonous inflammation, or puerperal processes of a septic nature. In a very considerable proportion of cases there is evidence of recent pneumonia, in others rheumatic affections of joints, and in a few diphtheritic processes. In the group of primary cases the lesions are entirely those of endocarditis, local and general. In the second place, there are the extensive pathological changes due to embolism, and these constitute interesting features in the disease, and may produce a very great variety of lesions in every portion of the body. The cases may be divided into those without any embolic processes, cases in which the infarcts are simple, not suppurative; those in which there are innumerable suppurative infarcts, and cases in which some of the infarcts are simple and some suppurative. It is remarkable how variable these embolic features are. They may be entirely absent in well-marked malignant cases. They are not necessarily associated with suppuration; indeed, in a very considerable number of cases they present the characters of ordinary hæmorrhagic infarcts, but in the traumatic and puerperal cases the infarcts are invariably septic. They may be few in number, only one or two perhaps in the spleen or kidney, or they may be in thousands throughout the various organs of the body. When suppurative, micrococci, in my experience, are always present; but the micrococci may exist in the vessels without inducing this change. In severe forms of the disease hæmorrhages are very frequent upon the skin, serous and mucous surfaces.

The Diet in the Febrile State.—At the annual meeting of the Medical Society of London, March 2, 1885, W. H. Alchin, M.B., F.R.C.P., read a paper on this subject, which is published in the *Lancet* of March 7. After speaking of the diet required in the healthy state, and the need for the food, or the object of its destination, he goes on to say: Turning now to the state of fever, although we must admit our knowledge of its intimate pathology to be deficient, we are nevertheless in a position to affirm that it is a general morbid state, characterized by a marked perversion of function, and associated with an equally marked alteration in the quality and quantity of the excreta, itself a material index of abnormal tissue change, the actual existence of which within certain limits the microscope reveals to us. The most prominent and obvious functional perversion is an elevation of temperature, and I think it worthy of notice that whilst this, the most characteristic feature, is excessive production of a by no means peculiarly vital force, but on the contrary of the most widespread form of energy known to us, those more distinctly characteristic features of living tissue—contractility, nervous irritability, and gland force—are all diminished in their manifestation. The muscular power of the febrile patient is deficient, his nervous energy is impaired, and the secretions are diminished. Whatever doubts one may entertain as to the seat of origin of pyrexia, whether the fever consists in disorder of the nervous centres, whereby there is a diminished loss of heat from the body, with a consequent retention, and so elevation of temperature, or whether the process commences in the protoplasmic tissues generally, and only secondarily brings about the systematic disturbances, the broad fact remains that there is an undue consumption of material.

There is a general agreement that the nitrogenous waste represented by urea, which is the most important (although equally true of uric acid and creatinin), is considerably increased, commencing even before the elevation of temperature and continuing throughout the whole febrile course. In so much as we shall see it is only in rare cases that the febrile state is not accompanied by a diminished nitrogenous ingesta, it must follow that the urea excreted must be drawn from the proteid tissues of the body, which undergo a more extensive disintegration than in health, and this should be remembered in reference to those cases where the total nitrogenous waste is absolutely less than that of health with ordinary diet, but is absolutely greater when the same healthy person is put upon a fever diet, which is invariably deficient in proteid alimentary principles. If, then, in fever we are to base the quality and quantity of our ingesta upon the character of the excreta, as has been done in regard to the healthy body, the nitrogenous alimentary principles should obviously be administered in excess over the normal requirements, whilst there is no very positive indication for an increase in the hydrocarbon or carbohydrate foodstuffs, or, at all events, not to anything like the same extent.

Now, let us consider how far experience, or at least practice, supports this conclusion. The dietetics of fever, like many other principles based upon insufficient data, have had their fashions, and opinion has swayed now to starving, now to feeding; we pride ourselves, perhaps, at the present day on maintaining a wise medium. I think I may be fairly stating the case if I say that a patient suffering from any febrile disease is put upon a diet consisting of two to three pints of milk, and one to two pints of beef-tea. It is worth for a moment considering what this really represents in terms of alimentary principles. Taking the milk in round numbers at fifty fluid ounces, that would contain about two ounces of proteids, the same quantity of fats, rather more of sugar, and about half an ounce of salts. In regard to the beef-tea it is well at once to recognize that as a nutriment it holds a very inferior position. Supposing the meat from which it is prepared to contain about 20 per cent. of nitrogenous matter, certainly not more than 1 to 1½ per cent. of the proteids will be extracted by any ordinary process of cooking, but with them there will be as much again, or even more, of the meat extractives, such as creatin, creatinin, etc., which although nitrogenous are not nutritious (*i.e.*, are unable to repair protoplasmic waste), and are members of the large group of bodies vaguely known as stimulants. A very variable amount of fat dependent on the quality of the meat used, and about one-half per cent. of salts, make up the 5 per cent. of solids which ordinary beef-tea contains. Such a diet therefore represents, as compared with the minimum requirements of a healthy adult in ordinary work, about half the proteids and fats, a third of the carbohydrates, and rather less than the necessary salts. This is clearly not in accordance with what we should consider to be called for in the febrile state, did we make the excreta the basis of our calculations; and yet we are accustomed to consider that such a diet is most suitable for the general disturbance of nutrition that fever indicates. Obviously, therefore, some other circumstance has to be considered, and that is the capacity for digestion exhibited by the fever patient.

It may at once be said that observations distinctly indicate that the saliva and the gastric and pancreatic juices are all diminished in quantity. The bile occupies a place apart, and of the intestinal juice in pyrexia I am not aware that any observations have been made. The obvious indications under such circumstances are to give aliment that requires the minimum digestion, to prevent as far as possible the delay of the food in the gastro-intestinal tract, and supplementing where we can the deficiencies of the secretions by artificially prepared ferments, acids and alkalies. Heat, as we have seen, is one of the force manifestations of tissue change, as urea, carbonic acid and water are some of the material expressions of the same. In fever the heat, the tissue changes and the excreta are all increased. The demand for increased food is therefore obvious, provided it can be digested or can be administered in such a diffusible form as to require but little digestive change. With secretions that have suffered such considerable alterations as I have described, the digestion of the ordinary articles of diet is impossible, and experience dictates a departure from the usual meals.

I have already criticised what may be called a typical fever diet of milk and beef-tea, and a reference to the general rules laid down and followed by those who are entitled to speak with authority on these points shows a remarkably large proportion of the proteid alimentary principles in the permitted diet relatively to the fats and starches. Such would be quite in accordance with the indications afforded by the excreta, but I rather think the real ground for such exclusion of hydrocarbon and carbohydrate principles (materials which, be it observed, form by far the greatest proportion of the solid ingesta in a normal diet) is a widespread belief in the incapacity for their digestion by the febrile patient, and the injurious effect of the lactic and butyric acid fermentations that take place in the stomach from the improper fermentation of the amyloids. But if these fats and starches are to be forbidden, and still more if the heat products of pyrexia be but slightly due to their combustion, one can see good reason for the larger relative share that nitrogenous material should take in the total aliment. But, notwithstanding this, I am doubtful whether there is not a flaw somewhere in the reasoning, and am justified by no less an authority than the late Dr. Parkes, in his memorable Croonian lectures on the "Elimination of

Nitrogen," in 1871 Referring to fats and carbohydrates, Dr. Parkes observed "a supply of fat to meet the disappearance of the same from the body is rarely attempted in practice, and yet there is no doubt that if digestible fats are given to fever patients the degree of emaciation is much less, and at the end of the fever the body seems more speedily to recover itself. The fats are often considered hurtful, and are sometimes excluded from fever diets, so that with the large supply of animal food the patients are brought almost into a state of Bantingism. The starches and sugars are generally given in fevers, and it cannot be doubted that this is right, though probably the amount given is usually far too small. An eminent physician desired for his epitaph the words, 'He fed fevers.' His pride in his treatment was legitimate; but it may be still a question with what they should be fed."

I do not know that we can honestly say we have reached a point much beyond this, even after the lapse of fourteen years; our knowledge is "not yet precise enough," and I am not sure that practice has guided us very far, it having preferred to pursue the old track without much question. I cannot help thinking that the strong objection held to the administration of amyloid food in fever is exaggerated. I am in the habit of insisting upon a fair share of it in the treatment of my patients, and I have not yet seen reason to attribute any ill effects to the proceeding. In the artificially digested foods that we have at our disposal now, I believe we possess alimentary principles that, in the form of partially digested proteids and amyloids, are quickly absorbed, and hence diminish the opportunities for butyric and allied fermentation, and also make less demand upon the digestive secretions. It cannot be too carefully remembered that one object to be aimed at in laying down a diet for fever is to prevent delay of the ingesta in the alimentary canal. Even the blandest and most nutritious aliment may become a source of noxious decomposition product when acted upon by juices secreted in the pyrexial state; but in reference to this the question of absorption has to be taken into account, and of the effect of fever on that I have no knowledge beyond what I have said respecting fats.

THE PUERPERAL FEVERS.—Dr. ROBERT BARNES (*British Medical Journal*), says: Whether there be a special puerperal fever, a fever *sui generis*, to be ranked with small-pox, scarlatina, typhoid, rubeola or erysipelas, is a question still keenly debated. This question I propose to examine by the light of physiological study of gestation and puerpery, and the clinical observation of the disorders that characterize these two states.

Clinical observation will teach us that there is not one puerperal fever, but several. Like Meigs and Arthur Farre, we must use the plural number, and give up the attempt to describe *a* puerperal fever. The task before us is only to be accomplished by a process of analysis. Thus, to set the problem as it comes before us at the bedside: On the third day after labor we find our patient exhibiting the common signs of fever.

In the first place, we may state two undeniable propositions:

1. The fever implies poison, that is, toxæmia.

2. The poison may have sprung up in the patient's own system, or it may have been taken up from an external source. This great distinction is the first step in the process of differentiation or analysis. I long ago emphasized this division of fevers in the puerpera by calling those which spring up in the patient's own system, *autogenetic;* and those which were due to empoisonment from without, *heterogenetic.* These terms have become classical, but their full meaning is not even yet appreciated.

Let us first examine the nature and production of autogenetic fevers. These lie at the very foundation of the whole question.

But we must start with a fundamental proposition which distinguishes the diseases of the gravida from the diseases of the puerpera.

The diseases of the gravida are diseases of high nervous and high vascular tension. The diseases of the puerpera are diseases of low nervous and low vascular tension.

We might add that the conditions which mark the diseases of the gravida also distinguish them from the diseases of all other persons.

Now we will briefly trace the puerperal process, which, if disturbed, may lead to autogenetic fever. The following are the factors to be taken into account:

1. There is the blood of the gravida modified by the processes of construction and nutrition of the embryo and uterus. They are: excess of fibrin, diminished proportion of red corpuscles, increased proportion of water, increase of white corpuscles. These characters are found at the time of labor, and the blood so constituted, differing as it does from the blood of woman in her ordinary state, is the blood in which are wrought the *post partum* and puerperal processes. Nor is the peculiar state of the blood all. The altered blood is associated with universal changes going on in the body. Tarnier reminds us that "Science records day by day new facts which lead us to conclude that, in the pregnant woman, there is not a single fibre or a single drop of liquid which does not undergo some modification." If there has been much hæmorrhage during or after the labor, the blood has become more watery and more charged with fibrin. The excess of albuminoid or colloid materials increases centripetal osmosis.

2. There is the fall of nervous and vascular tension, involving a change in the dynamic state of the circulation.

3. There is a period of comparative rest following labor, of preparation for the active processes of breaking up of the tissue used during pregnancy, now superfluous, and of casting out the refuse-stuff. This period may be stated to be about forty-eight hours. We rarely see evidence of self-empoisonment before the third day.

4. At the end of the second day, the process of disintegration of the uterus and other organs has begun. An immense revolution is at hand. The proceeds of the disintegration of the uterus and other superfluous structures are rapidly taken up into the circulation, and ought to be as rapidly converted and excreted. Absorption revives. The lymphatic vessels and venules have come into active function. If the lymphatic system and liver, especially, fail to modify the

waste-stuff brought to them, so as to fit it to enter the circulating blood, then this unprepared, unmodified waste-stuff is noxious; poisonous. Hence one form of toxæmia.

5. But, even assuming that the waste-stuff enters the blood-mass properly prepared or digested, unless it be got rid of *pari passu* there will be accumulation of waste-stuff in the system. This, again, is a form of toxæmia. Hence, there must be easily working excretory organs; the lungs, kidneys and skin must be sound.

6. Now it is obvious that both the evils pointed out may co-exist, that is, the conversion of the waste-stuff and the excretion may both be defective. Hence, already we see a complex toxæmia, purely endogenetic, derived from no external source.

7. Fresh dangers are at hand. It is a remarkable fact—not without practical interest beyond our immediate theme—that all the successive steps in the history of reproduction are marked by violent lesions of tissue, ruptures, or lacerations. The bursting of the Graafian follicle and ovary, the frequent rupture of the fourchette and of the hymen in coitus, the tearing of the cervix uteri during the passage of the child, the disruption of the placenta from the uterus, the laceration of the perinæum, are obvious illustrations of this proposition. Another fact, less obvious, but even more constant than some of the preceding, is the violent bruising to which the parturient mucous tract is exposed during labor; a process which may be likened to glacier-action takes place. The mucous membrane in contact with the head glides down under the influence of friction, separating it to some extent from the submucous tissue. In this movement the connecting vessels are torn. Hence the ecchymosis commonly seen in necropsies about the cervix uteri and vagina, if performed within a week of the labor. Not only is there commonly found extravasated blood, but a quantity of effused serum in the stretched and torn connective tissue. This condition of the mucous membrane has not hitherto, as far as I know, been considered. I am disposed, however, to think it is often the most important factor in the poisoning process. It is the most active and constant poison-route.

8. Here, then, are several roads open to the reception of poison from the mucous tract. If no poison collect on any part of this septicode receptive tract, the wounds heal readily and the door is closed. It matters little that there existed an extensive traumatic surface. But if blood or lochial discharge remain in the uterus or vagina, and air finds its way into contact, decomposition takes place; the case has increased in complexity. There is, first, the fundamental state of the blood derived from the gravid process; second, the blood further modified by the waste-stuff from disintegration of tissue; and, third, there is the septic stuff taken up from the wounded mucous tract.

9. The puerpera is still open to toxic invasion from other sources. Poisons altogether foreign to her may be brought into contact with the traumatic tract, and be absorbed. Thus, the cadaveric poison from dissecting may be inoculated by the finger used in examination; other poisons, the result of diseased action, clinging to the obstetric finger, may be inoculated in like manner; sponges or linen tainted with similar poisons have been the carriers of poison to the geni-

tals. In some of these instances it is probable that bacteria play an important part; certain it is that poisons may be inhaled. Thus, another complication is added.

10. Then the puerpera is peculiarly susceptible to the ingestion of the zymotic poisons: typhoid, variola, scarlatina, rubeola, erysipelas, act with special virulence in the blood of the puerpera. It has been the fashion to say that scarlatina in a puerpera is scarlatina and nothing more. It is something more. The scarlatina-poison finds in the puerperal blood, loaded with refuse-stuff which it cannot excrete, a medium specially favorable to the development of mischief. If this poison enters the puerperal blood, its elimination is arrested; the morbid train is fired. We have developed a form of toxæmia compounded of the autogenetic forms previously described and of the scarlatina poison. This is very different from simple scarlatina. In these cases the characteristic rash and sore-throat are often wanting. It may be doubted whether the zymotic poison always goes through the successive stages of zymosis characteristic of the simple scarlatina. The poison works in a specially prepared field in a special manner. It throws out of order the puerperal process. It arrests or prevents the disintegration process, the due absorption by the lymphatics, the modifying action of the lymphatic glands and liver, the excretory function of the lungs, skin and kidneys. Thus we get a complex poison which cannot be called waste-stuff poison, septicæmia, pyæmia or scarlatina, but is a compound of all, and perhaps of some new innominate poison, the product of their inter-reactions.

11. Another factor must not be lost sight of. Emotional disturbances play an important part. An emotion storm may so affect the heart and nutrition that the blood curdles—clots suddenly. Emotion is in many cases the most conspicuous genetic cause of puerperal fever. Where it is not the primary cause, it may often be a secondary exacerbating cause.

We may summarize the forms of puerperal toxæmia under three heads.

1. The self-empoisonment resulting from the loss of balance between absorption of waste-stuff and its excretion. This may be called *endosepsis*, since the poison arises within the system.

2. Self-empoisonment from absorption of the foul stuff of decomposition in the uterus. This may be called *autosepsis*, since the puerpera takes poison of her own making. This is what has been more especially called septicæmia.

3. Empoisonment from foreign sources. This may be called *exosepsis*.

There may be a simple endosepsis, but autosepsis also implies endosepsis; and exosepsis is a compound of all three.

Endosepsis is not, I believe, communicable or infectious; autosepsis is. The discharges from one puerpera, which are capable of poisoning herself, may poison another puerpera. Exosepis is doubly infectious; it is infectious as autosepsis and as a zymotic.

Let us endeavor to classify the various forms of fever that occur in the puerpera:

1. There is the simple excretory fever, the result of toxæmia induced by the retention in the system of the waste-stuff of involution.

2. Then there is the fever from toxæmia induced by the absorption of foul stuff from the parturient canal, either absorbed through the mucous membrane, or through the wounds made during labor. This is a compound toxæmia; it is so-called septicæmia, *plus* toxæmia from retained waste-stuff of involution.

3. Limiting our inquiry for the present to the endogenetic and autogenetic fevers, we next find that the puerperal blood is variously affected by the poisons that enter it. In some cases the poison, entering by the lymphatics and veins of the uterus, finds the blood in a condition to resist general invasion of the circulation. The poison is more or less localized or spent upon the blood in the pelvic vessels, or in the uterine walls. In the first case, the ingested poison acts as a precipitant upon the hyperinotic blood and lymph, and we have clotting or thrombosis; that is, thrombotic puerperal fever, or phlegmasia dolens.

In the other case, the invading septic stuff, more or less opposed in its progress, causes inflammation in the veins, lymphatics and other tissues of the uterus and broad ligaments, which is almost sure to extend to the uterine and pelvic peritoneum; hence we have the various forms of metritis, pelvic cellulitis or parametritis, and of peritonitis.

Sometimes the ingested poison breaks bounds and affects the entire volume of the circulation. There are at least two conditions observed. In one, the poison pervades the whole system, causing fever, without any tangible tissue-change or inflammation. In the other condition, there is at first pelvic inflammation, metritis, or phlegmasia dolens; but under the continuous imbibition or generation of fresh poison, and the degraded condition of the blood, the local barriers that resisted the first impulse of the invading poison yield, and general toxæmia ensues.

Then we come to the heterogenetic fevers. These may be divided into two classes:

1. Some are due to the inoculation of some foreign poison, as the necrotic poison taken from dissection, or some foul stuff, the result of animal or vegetable decomposition, brought into contact with the wounded parturient canal, or inhaled or swallowed. I suppose there are few who have not had reason to conclude that a puerpera inhaling sewer-gas has in this way contracted a fever.

2. The other class of poisons are the recognized zymotic poisons, as smallpox, scarlatina, rubeola, typhoid, perhaps erysipelas. These poisons, when they attack the puerpera, still so far preserve their special properties that they run their course, if the patient survive long enough, and may propagate like disease to other puerpera, or non-gravid persons; but their ordinary clinical phenomena are often masked or changed by the reaction in the blood peculiar to the puerpera, so that the special poison is not always recognized at the time of clinical observation.

From this rapid and imperfect sketch it will be seen that the puerpera is liable to the invasion of a great variety of poisons, inducing a variety of fevers, and that the one constant thing that specializes these fevers is the puerperal constitution.

I have not touched upon treatment. The question of the constitution of puerperal fevers is large enough for one address. It is by far the most important question. Prophylaxis is easier than cure.

A Plea for Episiotomy.—W. P. Manton, M.D. (Harvard), Detroit, Mich., writes as follows to the *American Journal of Obstetrics* for March, 1885: In looking over the literature of the expulsive stage of labor, one is rather surprised to find the scanty reference made to what should be considered one of the most importance of surgical procedures for the prevention of perineal rupture, namely episiotomy, or the lateral incision of the perinæum.

When so distinguished an accoucheur as Dr. Playfair says of episiotomy that he "questions if it be likely to be of use," we must believe that the operation has not been done sufficiently often in the lying-in wards of King's College Hospital to prove its efficacy. One hesitates to criticise the opinions of men who are known to the world as Nestors in their individual specialties, and yet investigation often tends to overthrow such opinions and place in their stead facts, which in their turn must also pass through the fire.

"If a laceration is inevitable," says Matthews Duncan, "treatment to prevent it can be of no avail."

How then, we ask, are we to know if a laceration *is* inevitable? Arguing from the above, the only answer can be, "wait and see; if it tears, it tears; otherwise no harm is done."

But Dr. Duncan is more progressive than the last writer quoted; he does not stop with the inevitable, but goes on to say that, "all the lacerations of the orifice of the vagina are not inevitable; and that one which is so may be treated with a view to prevent its extension beyond the inevitable degree."

After quoting from various other authors, Dr. Manton proceeds as follows:

Disregarding deformities of the pelvis and the fœtus, which are not infrequent causes of perineal rupture, we have remaining, causes due to the patient herself, abnormal conditions of the vulva and perinæum, and manual and instrumental delivery of the child. The patient herself may produce a laceration by too violent bearing down or straining, especially when the uterine contractions are abnormally strong or "stormy."

Position during delivery no doubt also plays an active part in producing this lesion. The soft parts may have undergone some previous operation, or disease, such as syphilitic or scrofulous ulceration, may have rendered the perinæum dense, hard, and cicatricial in character.

Acute and chronic œdema of the parts, as in delayed second stage, in nephritis, and sometimes in twin pregnancies and hydramnios, leave the tissues in a soft, doughy and non-resisting condition. B. Schultze further gives as a cause the abnormal rigidity of the ligamentum triangularis, which Winckel thinks is probably very often confounded with contracted pubes, a condition rarely seen except in osteomalacia.

I have found two classes of women particiliarly liable to rupture. In the first we find dark skin, and well-developed muscles, covered by a dense layer of adipose tissue. Here the perinæum is usually thick, stiff and unyielding. The second class of patients are women almost the opposite of the first, having a loose, flabby, soft muscular development. Here the perinæum may distend like India-rubber, but is liable to tear without the slightest warning. I have heard old midwives designate such as a "butter" perinæum.

Incidentally, other conditions of the tissue may lead to rupture.

Of instrumental, etc., interference, nothing need be said, as rupture from this cause very often depends upon the skill and experience of the practitioner.

Dr. Manton next gives some statistics of perineal rupture, taken from various German authorities, and says:

In the face of these figures, which at least express the relative frequency of perineal rupture, it would appear that something ought to be done to bring about a diminution in the number of cases. In episiotomy, I claim, we have an efficient and—compared with spontaneous rupture—a safe and sure means.

In saying this I do not advocate a new and untried procedure, but one which has stood the test of years.

This operation was first suggested by Michaelis during or about the year 1799.

It consists in making an incision with a probe-pointed bistoury, or scissors, on one or both sides of the frenulum, about two to three cm. above its middle. The knife—which I prefer to the scissors, although the latter are used in many of the Continental schools—is laid flat against the fœtal head, and slid between it and the tense ring at the vulvo-vaginal orifice. If the knife is now turned on its back, so that the cutting edge comes to the constricting ring, and is gently raised in the direction of the ischial tuberosity, an incision will be made, the length of which can be regulated by the operator.

As a rule, from one to three cm. is all that is necessary; and it is just as well not to include the external skin in the incision, although no harm is done should this take place. The operation should be performed on the opposite side if required; but very often unilateral incision is sufficient. The incision should be made just at the close of a pain, while the tissues are still tense, but the acme of the uterine contraction has passed.

There is little or no pain produced by the cutting; indeed, I have done it several times without the patient's knowledge.

Care must of course be exercised not to include a fold of the fœtal scalp, or a bunch of hair between the edge of the knife and the frenulum. If the operation has been quickly and skillfully done, the head may be delivered during the pause succeeding the incision; but it should not be allowed to escape during a contraction, lest the incision be torn down, or a posterior rupture also take place.

Rarely these both will occur in spite of our best efforts.

The after-treatment consists either in uniting the incisions by one or two sutures—a performance which I confess I have never found necessary—or in cleansing the wound with a bit of antiseptic cotton, and then dusting the surfaces liberally with iodoform.

The cuts heal perfectly in the course of a week.

The indication for episiotomy as given in the books is a *threatening* laceration. This prescribes its usefulness too closely.

There are very many instances where there is no apparent danger of rupture, but, on account of the smallness of the maternal parts, it is impossible for the head to get through. Here incision, instead of the forceps (in certain instances both), is certainly indicated. Credé also mentions that it should be thought of in prolonged and painful labors, to shorten the sufferings of the mother.

The objections to this operation seem to consist:

1. In the fear that some anatomical element of the vulva, as the vulvo-vaginal gland duct, etc., may be injured; that the cut surfaces may be a point of departure for infection, etc., and that the incisions do not really prevent rupture.

2. That, if advocated, it will be unnecessarily often performed.

I have myself performed and witnessed the performance of episiotomy a large number of times, and up to the present have seen none of the evil effects which some attribute to it. I have never seen the deformity, painful cicatrices, etc., which Parvin says Tarnier has observed, and am inclined to believe that they are rare occurrences. That the wounds might prove points for the entrance of septic material cannot be denied; but in those cases which I have noted this has not taken place, and the slight rise of temperature which has occasionally been found can just as well be attributed to fæcal accumulation, or to injuries higher up in the parturient canal, as to the lateral incisions.

In 2,000 cases examined by Credé there were records of 33 deaths. Autopsy showed 19 of these to be due to infection; the other 14 cases where the perinæum was *intact*—a percentage of 0.954; while only 4 died who had perineal laceration—a percentage of 0.934, a scarcely appreciable difference. This would seem to indicate that the chances for infection are about equal, whether episiotomy is done or not.

It cannot be said that lateral incision saves the perinæum in all cases, but of 957 primiparæ of which I have notes I find but two cases of posterior laceration recorded as occurring after episiotomy.

Whether or no the advocacy of this operation will lead to its abuse remains to be seen.

In the foregoing pages I have attempted to show:

1. That the percentage of perineal ruptures is very large.

2. That certain conditions of the maternal soft parts, etc., predispose to rupture.

3. That episiotomy diminishes the frequency of these ruptures to a minimum, and thereby rescues a corresponding number of women from a greater or lesser amount of suffering.

4. That only in very exceptional cases does rupture take place after episiotomy.

5. That the danger of infection is no greater where episiotomy is done than where it is not.

If the above statements are correct, there is no excuse for the accoucheur who allows a perinæum to rupture without having first done episiotomy for its possible prevention.

## Toxic Enteritis Caused by Corrosive Sublimate as a Surgical Application.

—In the *New York Medical Record*, March 14, 1885, Dr. George L. Peabody says: In the February number of *Virchow's Archiv* an article with substantially the above heading appears, by Dr. Eugen Fränkel, prosector in Hamburg. His attention seems to have been called to the subject by a short communication in the *Centralblatt f. Gynakologie*, by Stadfeldt, of Copenhagen, in which is reported a fatal case of poisoning in a woman who was treated for retained placenta. After manual removal, her uterus was washed out with a solution of the poison in question, of the strength of 1 to 1,500. Four hundred cubic centimetres of this solution had been injected when she suddenly suffered from collapse, from which she rallied under appropriate treatment. On the evening of the same day she had diarrhœa and tenesmus, and later bloody stools, which continued until her death, ten days later. The autopsy revealed in the large intestine numerous ulcers of an irregular or circular shape. The mucous membrane was congested generally, and the ulcers were especially frequent in the rectum.

This condition of ulceration throughout the large intestine corresponded so closely with the results which I have found in several autopsies recently of persons subjected to the action of bichloride of mercury, that I was tempted to search my records for facts bearing upon the question, and was quite surprised at the evidence which was thus acquired. Dr. Fränkel says that he has made autopsies of fourteen cases, treated by Schede with this poison, in which toxic enteritis was produced by it during the last two years and a half. Of these fourteen cases, two, he thinks, were killed by the action of the poison directly. In the others, he seems to think that the action of the drug was not wholly responsible for the fatal issue. These cases were of the following kinds: seven phlegmons, two caries of vertebræ, one psoas abscess, one amputation of thigh, one removal of mamma and axillary contents, one laparotomy for the removal of uterus and its apendages, one supra-hepatic echinococcus cyst, one myomotomy. This list, it will be observed, includes fifteen cases instead of fourteen.

The inflammation was always present in the large intestine, but only exceptionally in the small intestine.

With great care he proceeds to point out the differences between this form of dysentery and the lesions of these parts caused by pyæmia. Moreover, the lesions of pyæmia in the other organs of these subjects were uniformly absent. He considers the ulcerative process due to an elimination of the drug by the large intestine, and holds up to ridicule the assertion made by Bott that corrosive sublimate applied to the surface has only a local action, as proved by the absence of mercury from the urine of patients thus treated. Its absence from the urine in these cases proves merely that it is not thus excreted in in these cases; and we should, therefore, search for mercury first in the stools, second in the saliva, and third in the urine.

The records of the New York Hospital for the past eighteen months have been searched by Dr. H. W. Stephens and myself for similar cases. Accounts have been discovered of eleven cases in which the use of the poison, as an antiseptic dressing or application, was followed by obstinate diarrhœa, which did not yield to the usual remedies, and which sometimes ceased on the drug being discontinued, but which, in seven instances, was followed by frequent bloody discharges, griping, tenesmus, prostration and death.

In three of these seven cases autopsies were made, and in each of them a very extensive diphtheritic inflammation of the large intestine was found.

After given a synopsis of these eleven cases, Dr. Peabody concludes as follows:

After having written the above brief communication, my attention was called to a publication by Schede, of Hamburg, on the subject of antiseptic treatment of wounds with corrosive sublimate, bearing date February 12, 1885, and also to one of the same date by W. Thorn, assistant at the Female Clinic in Halle, which is an urgent plea against its use in midwifery.

Schede admits frankly the dangers in certain conditions, and under certain circumstances; but thinks it still doubtful whether some of the intestinal lesions which have been ascribed to it may not be due to other causes, especially to pyæmia.

Fränkel, however, carefully differentiated his cases from pyæmia, and in my own cases the usual lesions of pyæmia were absent.

Schede gives histories of several fatal cases of poisoning, with greater or less destruction of mucous membrane of the large intestine, reported by different observers in lying-in women, in which, however, other contributing causes of death are alleged. He concludes that for surgical purposes it is still the best antiseptic, if it be used discreetly, and with the full knowledge of the symptoms of its poisonous effects; but he instances several classes of cases in which even he considers it unsafe.

Thorn makes an urgent plea for its total abolition from midwifery and gynæcology, alleging its great inferiority to carbolic acid, and the dangers attending its use. His paper is accompanied, as is Schede's, by elaborate statistics, which will well repay perusal.

It is not my purpose to do more than call attention to the facts which have come to my knowledge on this subject, and to sound a warning to those who are using the bichloride of mercury extensively in surgical, obstetrical and gynæcological work.

It seems only right to emphasize the fact that, so far as I have been able to learn, death has not resulted from its use in surgical dressings, such as bandages, etc., but only after irrigation of abscess cavities, uteri, vaginæ, large wounded surfaces, the peritoneum, etc.

It is not unlikely that many deaths have resulted from its use that have been ascribed to other causes, for the reason that we have only recently become aware of the possible dangers that attend it.

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"MRS. ALLEN'S HAIR RESTORER."—According to Masset, this contains the following percentages: Precipitated sulphur, 1.7; powdered cinnamon, 0.2; glycerin, 32.0; lead acetate, 2.65; water, 63.5. Among the perfumes, nitrobenzol is prominent. Wittstein gives: Sulphur, 5.6 grm; lead acetate, 8 grm.; glycerin, 100 grm.; water perfumed with aromatics, 200 grm.—*Druggists' Circular.*

# SELECTIONS.

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THE CURE OF WRITER'S CRAMP. By A. DE WATTEVILLE, M.A., M.D., B.Sc., Physician in Charge of the Electro-Therapeutical Department, St. Mary's Hospital.

The group of symptoms—neuralgic, paralytic and spasmodic—the varying combination of which, in individual cases, constitute the ailment known as writer's cramp or scrivener's palsy, has hitherto defied the most strenuous efforts of therapeutics. At least, the instances in which improvement has taken place are so few and far between as to illustrate the saying that "exceptions confirm the rule."

I need not, in this paper, give a full account of the different theories propounded at various times in explanation of this singular neurosis. The fact of its clinical versatility, sometimes with a sensory, oftener with a motor predominance of symptoms (tonic, clonic or paretic), certainly points to a strictly peripheral origin. Several observers have adopted this view, and Dr. Vivian Poore, who has devoted much attention to the etiology of writer's cramp, has advocated it with much ability, describing this ailment as an instance of what he calls "chronic muscular fatigue diseases." In this category, and intimately connected with the complaint now under consideration, naturally fall all those cases where groups of muscles brought into play in the preformance of acquired co-ordinated actions become the seat of nervous troubles. These "professional neuroses," as they have also been called by German writers, have received a considerable amount of attention during the last few years. Cases have been described among violinists, pianists, telegraphists, as well as among lawyers, tailors, machinists, and even ballet-dancers.

The pathognomonic symptom of the muscular disturbances in this class of cases is that the spasm or paralysis, as the case may be, becomes apparent only during the action which brings the particular co-ordination into play. With reference to the pain, when it does exist, it may be spontaneous; but if it be called forth or exacerbated by movements, it is only these co-ordinated actions which have the property of doing so.

Now with reference to the treatment of these "professional" neuroses, it may fairly be said that, not only has the "Pharmacopœia" been ransacked in the search of a suitable drug wherewith to combat the symptoms, but every known external means of treatment has in vain been tried. Successes in individual cases have occasionally been reported, but no method has proved regularly successful. Variously shaped pens and supports for the hand and arm are but very poor substitutes for the healthy action of these parts in writing. Electrical and hydropathic applications have failed, even when combined with protracted rest and hygienic measures. Massage, if we are to believe sundry reports, has proved of service in certain cases; but until five or six years ago no one claimed to have discovered a method by which a large percentage of the sufferers from writer's cramp and other "professional" neuroses were speedily and permanently cured.

In 1881 Professor Charcot, on reliable reports published by some of the leading physicians and surgeons in Germany, called to Paris a gentleman, Mr. Julius Wolff by name, whose successful application of massage and gymnastics combined had earned for him a great reputation in his native country. Two inveterate cases of writer's cramp were placed under his care, with the result that in both the patients were able to resume their pens after two or three weeks' treatment (*Progrès Médical,* January 21, 1882). Since then the new method became known, by name at least, in this country; and we find it described, for instance, in the second edition of Dr. Ross's classical treatise on the "Diseases of the Nervous System," vol. i., p. 606. (See also the "Year-Book of Treatment, p. 38.)

During the latter part of last year Mr. Wolff came over to this country for the purpose of demonstrating his method. The discouraging failures which had hitherto attended all my efforts for the relief of the comparatively numerous cases of writer's cramp and allied neuroses it had been my fate to meet, as contrasted with encouraging results obtained by the new system, made me anxious to obtain personal evidence as to its efficacy. I followed with keen interest the cases of two patients, treated under my eyes by Mr. Wolff, and of which I give a condensed account.

*Case* 1.—Mr. H. S., representative of a house of business, aged 38, was sent to me by Mr. Ernest Hart, with a view to deciding whether his case was a suitable one for the application of Wolff's method. The patient is tall and muscular, and, though formerly rather delicate, has had no serious disease. There are some neurotic antecedents in his family. His present complaint began very gradually many years ago. He lost the power of writing quickly; his handwriting, which used to be good, became indifferent, from the uncertainty of his movements. Pains appeared in the forearm, upper arm and shoulder. The thumb, index and middle finger became the seat of cramps, accompanied with much pain. The spasm of the thumb made it slip off the pen. Then the hand began to turn. It took him fourteen minutes to write two lines in a very shaky manner. The patient had to give up his employment, and apparently improved by protracted rest; but not sufficiently to resume his writing. He was in this condition when I saw him, and as the case was one of typical writer's cramp, I immediately sent him to Mr. Wolff, under whose treatment he remained four weeks. The operations of stretching, massage and local gymnastics were repeated twice a day for from twenty-five to forty minutes each time. He has since called upon me to report himself cured.

*Case* 2.—Mr. F. B., merchant, a strong and healthy man, aged 35, without any antecedents worth noting, has for ten years been unable to write properly. He began, without known cause, to experience a sense of fatigue in the hand and arm, but no pain. The thumb and little finger became more especially the seat of the feeling, which, however, did not preclude the possibility of writing. Actual weakness, however, set into these parts; later still, tremors and violent spasms made their appearance in the whole hand, in the thumb more especially. The power of guiding the hand was lost. On trying to write, the patient experienced such violent shaking that his whole strength of will was unable to overcome it sufficiently to shape the letters. He could freely use his hand for every other purpose. He then gave up every attempt at writing. For the last three years he has been able to trace a few words. I saw this patient early in December, when he began Mr. Wolff's course of treatment. After five weeks he was able to write for hours without pain, spasm or tremor, and has now resumed an active share in all the duties of his profession. I may add that, as is usual in such cases, all the ordinary methods (electricity, hydrotherapy, etc.) had been tried previously, and failed.

The result obtained in these two unselected cases, as well as authentic reports obtained by myself of other cases treated at the same time in this country by Mr. Wolff, convinced me that his previous reputation rested upon a solid basis. In London his success has been the same as that witnessed by Professors Bamberger and Billroth in Vienna, by Professor Esmarch in Kiel, by Professor Bardeleben in Berlin, by Professor Nussbaum in Munich, by Professors Wagner and Schmidt in Leipzig, and equally eminent authorities in several other continental towns. I therefore thought it my duty to call the attention of the medical profession in this country to the fact that the hitherto intractable forms of neurotic disturbances, which we, for brevity's sake, may call "writer's cramp," can no longer be said to defy therapeutic measures. I have never practised myself the manipulations required to bring about the desired result, but have witnessed Mr. Wolff—who makes no secret of them—at work on some of the patients entrusted to him. These manipulations, besides being fatiguing to the operator, require a considerable amount of "tactus eruditus," or, more plainly, of "knack."

The massage consists of rubbing, kneading, stretching and beating of the fingers, and the several muscles of the hand and arm, with or without the simultaneous assistance of elastic bands.

The gymnastic exercises are active and passive. The latter consist of flexions and extensions of all the joints of the fingers, hand and arm. Active exercises include systematic voluntary movements of the parts affected; and if the general condition of the patient requires it, of all the limbs and trunk. As a rule, at least two sittings daily are required, extending from twenty to forty minutes each on an average; and, in addition to this, the patient may be required to practise the gymnastic exercises at home. Later on, graduated exercises in writing are prescribed. It is impossible to enter into minute details concerning these operations, which must vary with the idiosyncrasies and peculiarities in the case of individual patients.

The extremely rapid results obtained by this method of purely peripheral treatment in some authentic and inveterate cases of writer's cramp appear to me to speak against the central organ of the disturbance.

[Since this article was written, I have had the opportunity of testing the daily progress made by a gentleman sent by me to Mr. Wolff. The case, one of the worst I every saw, was of seventeen years' duration ; and yet, before a fortnight had elapsed, the use of the pen had returned to such a degree as to allow the patient to write for several hours a day, and with almost normal rapidity and firmness.]

Mr. Wolff having been but a short time in this country, I have had no personal evidence of the durability of the cures effected by him. But I have before me a letter written by a gentleman six months after his recovery from a writer's cramp of seven years' duration.

In the *Deutsche Medicinal-Zeitung* for January 25, 1883, we also read of a case presented to the Medical Society of Berlin, in which no relapse had occurred four years after the treatment.

Mr. Julius Wolff, who is not a medical man, has from the beginning very wisely refused to act independently of the profession, and makes it a condition that in every case the treatment shall be undertaken under the responsibility of some qualified physician or surgeon. I have much pleasure, therefore, in inviting practitioners who have under their care patients suffering from writer's cramp, or some allied form of neurotic disturbance, to address themselves to Mr. Wolff, who is at present residing in London (28 Duke street, Grosvenor square, W.). I feel sure, from my personal knowledge of this gentleman, and from experience I have had of his method, that they will have every reason to congratulate themselves on the result.—*British Medical Journal.*

### REMARKS ON TYPHOID FEVER IN THE YOUNG. By A. JACOBI, M.D., Clinical Professor of Diseases of Children in the College of Physicians and Surgeons in New York.

The number of typhoid fever cases treated in the Children's Pavilion of Bellevue Hospital, from October, 1882, to September, 1884, and recorded in the books, was 25; of these 11 were males, 14 females; 17 ran a single course, 5 had relapses, 3 were sick over a period of from 4 to 6 weeks without permitting the second attack to be distinguished from the first by an alleviation of the symptoms. In 7 cases a distinct chill was mentioned as ushering in the sickness; in half a dozen more, several attacks of chilliness. The ages of the patients were from 2 to 14 years; the average 9. Pain in the ileo-cæcal region was complained of in 14 cases; diarrhœa was noticed in 15; bloody stools, not exactly hæmorrhages, in 3; in 6 constipation was mentioned as a notable fact; in 6 the first week of the disease was marked with epistaxis. Tumefaction of the spleen has been noted in 16 cases; roseola was observed in 14 cases. Its first appearance took place between the fifth and tenth days; it lasted from 5 to 10 days. Premonitory symptoms were reported in 9 cases; in 4 they lasted 2 weeks. They consisted in lassitude, loss of appetite, change of temper, and in some cases diarrhœa set in a week before the initiating chill or chilliness.

Five of the cases died, one remained stupid and hard of hearing for some time, the others recovered.

In a lecture on typhoid fever published by me in the *Medical Record* (1879, Nos. 17 and 18), I insisted upon the average mildness of the typhoid fever of infancy and childhood, and pointed to the low rate of mortality as a fact. Indeed, the younger the child, the more favorable is the prognosis. How is it that our Bellevue service should have a mortality of about 20 per cent.? That the mortality rates of many authors are as high? Oesterlen estimates it at 22 per cent.; Friedrich at 23 per cent. for children under 5 years of age.

In the years 1882 and 1883 we had a great deal of typhoid fever in New York City, and severe cases. The epidemic commenced early in the autumn; many cases were imported into the city by the summer guests of the country. In those seasons the infants, and particularly the half-grown children, were more seriously attacked than usually. From amongst these our Bellevue patients were mostly recruited. Besides, there is an important source of mistake in the statistics of hospitals. This mistake is occasioned by the fact that the hospitals with us do not contain the average cases, but, as a rule, those only which fare badly and promise badly. . . . . The general practitioner is the better judge and statistician. He sees all the cases in a family—those remaining at home and those sent to a hospital—sees the mild and the severe cases, and counts those who survive. Six cases in a family, of which one is sent to the hospital, may give the family practitioner a mortality of 16 per cent., the hospital attendant a mortality of 100.

The average severity of our cases was greater than normal in these two years. The intestinal affections in at least 15 cases were very marked. This, however, is not the rule in all years. We are justified in saying that our New York typhoid fevers do not exhibit by any means the severe diarrhœa of which we hear so much in European reports. We know of many epidemics in which the peculiar stools do not make their appearance at all, or are but rare and less characteristic; still the disease is unmistakably the same, and the morbid changes in the intestinal mucous membrane are met with at autopsies. If that be so in the adult, it is still more so in the young. The infant and young child yields but little typhoid diarrhœa; indeed, the most striking symptoms of the disease may be absent. The spleen may be but little swollen, meteorismus trifling, roseola absent in many instances, bronchial symptoms scarce—still the case is one of typhoid fever. Why this should be so is not easy to determine. In former times I explained the fact by the smallness and small number of Peyer's plaques in early infancy. This portion of the lymphatic system—in contradistinction from what is known of the general activity of the lymph system in the young—is but little developed. Thus, as it yields a prominent localization of the disease, I thought that the fever became less severe in proportion to its lesser appearance in the ileo-cæcal region. But Peyer's plaques are so low down in the intestinal tract that we need not fear the absorption of much poison in that place. Before the poison reaches the valve at all, its whole mass or larger portion must have been absorbed into and circulate in the blood. It is possible, therefore, that Gerhardt's theory is more correct. He refers to the fact that infants and children drink but little water, and that such as they do partake of is mostly boiled, and thereby made innocuous. Thus, it is possible that the typhoid poison, which may enter through either the respiratory or the digestive organs, is more or less excluded from the alimentary tract of the young, and that the gradual introduction of the poison into and through the lungs is the main road through which typhoid fever enters the organism of the infant and child. That would explain, first, why the character of the disease is so much milder in the young; second, why diarrhœa is frequently missed, and constipation is so apt to take its place in so many typhoid infants and children.

The local changes in the intestine are less marked than in the adult. In many cases the region of the ileo-cæcal valve only is affected, its redness being either dendritic or uniform; not often is the colon also, with the exception of its upper part, in a condition of catarrhal congestion. The mucous membrane exhibits but rarely the peculiar infiltration so common in the adult. The ileum has but slight and superficial erosions; deep ulcerations are not frequent, in infancy they are but exceptional. The assumption, however, that where there are ulcerations there must be diarrhœa, is not founded on uniform facts. In Ward 28 of Bellevue Hospital I had a patient, eight or nine years ago, a girl of eleven years, who was under observation for typhoid fever several weeks. The case was one of unusual severity—spleen, lungs, skin, nervous system yielding the usual symptoms; but there was no diarrhœa at any time. She died with the symptoms of perforation. Perforation of one of the typhoid ulcerations was found at the autopsy. Nor is this the only case of the same description in my experience. In the proceedings of the Pathological Society, ten years ago, there is mentioned the case of a man who died in my service in the Mount Sinai Hospital, with the same symptoms of perforation without any diarrhœa in the course of his illness.

Even in the cases in which in children diarrhœa may set in about the end of the first or in the second week the beginning of the illness shows constipation of the bowels rather than looseness. Many, however, of the cases which form the basis of these remarks had diarrhœa as one of the first symptoms. In some instances it preceded the chill or chillings by a week, or even two weeks.

The symptoms belonging to the nervous system, such as restlessness, or coma, or delirium, were marked in five or six of our cases. As a rule, however, the average typhoid of infancy or childhood enjoys great immunity. The temperature of the body in mild cases is seldom high; it ranges often between 101° and 104°. Frequently the patient feels very easy with these elevations; indeed, it is a peculiar feature in the typhoid fever of all ages that the feelings of the patient stand in no relation to the height of the fever. There is but seldom that regularity of the temperature curve of typhoid fever of which we hear and read so much. Reading the accounts of actual or alleged temperature curves in typhoid fever, no matter whether left to themselves or under the influence of medicinal agents, is enough to make one believe that nature acts under police laws, with prohibition principles. Instead of one daily curve, we have often noticed two; instead of a morning remission, we have had evening remissions; instead of a gradual increase in temperature from day to day, we had many times high temperature; instead of the regular two weeks and a half or three of fever, we had a sudden relief about the end of the second week or before, and mostly in exactly those cases which commenced with very serious symptoms and great elevations of temperature. We had no tumefaction of the spleen—at least, none sufficient to be diagnosticated by percussion—in several cases, an inconsiderable increase in others; in some, it is true, a considerable swelling. In some, it would decrease in the beginning of the third week; in some, too slowly for a favorable prognosis. The latter depends, to a great extent, on the condition of the spleen towards the end of the disease. When the spleen remains large, I prepare for a relapse.

Among the complications incidental to the typhoid fever of infants and children, those located in the respiratory organs are apt to be of great importance. The bronchial catarrh attending every case is liable to develop into a mild or serious bronchitis; the latter into broncho-pneumonia. . . . . Gangrene in the lungs of children suffering from typhoid fever I have seen in but a very few instances in the course of my professional life. In the young, hypostatic pneumonia is not frequent. After the age of eight or ten years it is sometimes found; at that age the typhoid fever assumes more and more the character it exhibits in more advanced age. Pulmonary œdema is sometimes the termination of broncho-pneumonia in a very adynamic case. Fibrinous pneumonia is very rare. Pleurisy, when occurring, is always secondary. Parotitis is very rare indeed; so are laryngeal ulcerations; I never saw a case in a patient under ten years. Noma and cutaneous gangrene are not so frequent in typhoid fever as they are in measles. Renal affections are not frequent; some of those recorded may be accidental complications rather than the outgrowth of the infectious disease. The brain and its meninges are liable to be affected with hyperæmia, as in every disease connected with a high fever of an adynamic character. . . . .

The rules of general therapeutics hold good for every individual case, but they must be intelligently and consciencieously applied. The fever lasts a certain time; care must be taken that the organism is placed in a condition to resist its influence. The main dangers may arise from the elevation of temperature, the loss of blood, the diarrhœa, the insufficiency of nutrition—this insufficiency depending on the condition of the nervous system impaired by the poison and injured digestion; finally, the debilitated heart. If the expectative method of treatment means, has it as frequently been understood, the letting alone of the disease, it is all right; if it means letting alone the patient, it is all wrong. It is not the disease we have to look after, but the sick. . . . .

To reduce high temperatures, quinia has frequently been recommended, though it has not served me well in infectious diseases. A dose from 8 to 10 grains (gramme 0.5–0.6) may be given during the remissions. It may be used internally or hypodermically. Now and then injections into the rectum, or suppositories, are required or advisable when the stomach cannot be relied upon. The preparation to be used in the rectum must be one of those which are most soluble, the bisulphate, muriate, bromide, carbamide. No acid must enter the solution; large quantities of glycerine are objectionable. The rectal dose is to be at least 50 per cent. larger than that employed internally.

The internal administration is often hindered by the taste of the drug. Thirty parts of the compound known as elixir simplex cover the taste of one part of the sulphate, provided the mixture is made with each dose and not kept ready; thus, the drug is to be prescribed in the form of a powder to be mixed with the elixir when needed. Preparations of coffee, either infusion or syrup, hide the taste of quinia quite well; so does, to a certain extent, liquorice extract. The neutral tannate of quinine is tasteless, but the dose must be two and a half times as large as that of the sulphate. The muriate agrees best with an irritable stomach, the bromide with an impressible brain. It is slow in producing cinchonism. The best preparation for hypodermic injections is the carbamide of quinia, which dissolves easily in five parts of water, remains in solution, and yields no deposits of quinia in the subcutaneous tissue. I have now employed it for years, exclusively, and observed serious local irritation in but one instance.

The salicylate of sodium I have often used, to the exclusion of quinia. After I found that a combination of quinia and salicylate of sodium would act well in many cases of hectic fever which resisted the effect of ether, I combined them for the purpose of relieving obstinate temperatures. This form of administration will but seldom be required, however. The dose for a child a year old is from 3 to 5 grains every hour or two, until 15 or 20 grains are taken.

Antipyrin I have used largely in an extensive general hospital service. In private practice, where I see cases irregularly only, my experience with it must not count. The cases I have administered it in were typhoid fever, pneumonia, hectic fever. Altogether, its effect is pleasant, fifteen or twenty-five grains given to an adult, once or twice, in intervals of from one to three hours, will reduce the temperature considerably and bring the relief expected. But the cases were not selected; good and bad cases, strong and feeble hearts, gave no indications. The only question in regard to the new remedy was its antipyretic effect. This it has undoubtedly. But in some cases the intense perspiration was a source of weakness and discomfort, and in a few, where rational medication was very desirable indeed, because of the severity of the case, the rapidly increasing debility of the heart, frequent and small pulse, weakness, approaching collapse, necessitated its discontinuation, in spite of the administration of stimulants. In some instances, after I discontinued antipyrin, I employed the salicylate of sodium, and, though its effect on the heart is apt to be unpleasant, sometimes it gave better results, being better tolerated than the antipyrin. I dare to predict that it will keep its place a little longer than kairin, which deserves the oblivion which has already overtaken it.

The best antipyretic is cold. Very few remarks may suffice in this connection. Its use has been praised and condemned, as deserves everything that is employed either properly or thoughtlessly. Most cases will do quite well with sponging, or friction with wet and cold towels. The latter plan acts both as a refrigerant and a stimulant. Cold bathing was once eulogized immensely and again abhorred, and warm bathing placed in its stead. The *rationale* of cold bathing is the cooling of the surface (that is, of fourteen square feet in the adult; proportionately in the young) with its immense surface circulation. As long as this continues to be active, new blood will come to the surface every moment, and the whole body is thereby cooled. When it is no longer active, the heart weak, the extremities cold, cold bathing is dangerous. The rule I prescribed many years ago was this: No cold bath for cold extremities; no more cold bath when once, after it, the extremities remain cold or cool. In these cases the surface becomes colder than before, it is true; the interior, however, warmer than it was. . . . . A great promoter of circulation, and thereby of radiation, from the skin, is surface warmth, and particularly warm extremities.

Warming-pans ought always to be used to the feet and legs when cold is to be applied. In place of cold bathing, I have always employed cold packing, from the chest down to the thighs, the arms mostly outside the pack. Nothing is easier than to wrap a baby up into a single wet towel, which is covered by a small blanket; in a case of urgency, it is replaced by another one (spread out beforehand) every two or five minutes. From twenty to forty minutes' packing will reduce the temperature from 106° to 101°, and below. If below, it is often necessary to warm the little body comfortably afterwards. . . . The question whether antipyretics ought to be employed at all, or how long, is answered by the general condition. As long as this is satisfactory, and particularly as long as the heart holds out, a febrile temperature harms but little. The common sense and ripe experience of the physician has to decide in every individual case whether or no the heart requires strengthening or stimulation. As long as the pulse remains good, and not frequent, we need not hurry with either antipyretics or cardiac stimulants. The latter will often be more indicated than the former, and by improving the surface circulation will reduce the temperature also. In this sense digitalis and caffein are antipyretics. In some cases they may be combined to advantage with strychnia or ammonia, or camphor and alcohol.

From this point of view I desire that the strong recommendations of digitalis in all sorts of febrile diseases should be judged. . . . .

If digitalis has been recommended as a remedy—by some *the* remedy—in typhoid and scarlet fever, in measles, pleuritis, pneumonia, peritonitis, hepatitis and rheumatism, the inference is not that the authors of such recommendations were incompetent observers, but that they published their cases when they had seen such only as had amongst their prominent and most dangerous symptoms the peculiar debility of the heart which required correction. The very fact of the self-limitation of infectious diseases renders the prognosis favorable when there are no peculiar complications. It is but necessary in many cases to guide the patients over a certain time, and digitalis will do that when the heart is the source of danger. . . . .

Digitalis, with its peculiar incompetencies in practice, its frequent ineqality in regard to the state of its preservation, its difficult solution and absorbability, its slowness in developing its effect, and, finally, its cumulative and undesirably persistent action, may often be replaced by another remedy, viz., caffein. Like digitalis, it regulates the heart's action and promotes diuresis, it increases the arterial pressure, and reduces the number of contractions of the heart. Its action is more rapid than that of digitalis, because it is very soluble; but it is more evanescent, because of its speedy elimination. The latter precludes the possibility of cumulative effect, but shortens the duration of its therapeutic action. Thus, it is better when time permits, and a certain quantity only is to be administered in the course of a day, to give it in a more frequent and divided dose. An adult will take from fifteen to thirty grains a day. Two or two and a half grains (0.12–0.15) every two hours is a fair dose for an adult, half or a quarter of that for a child. It may be increased to twice that quantity for the first few doses, every two, three, or four hours. Palpitations, dyspnœa resulting from heart disease, pulmonary œdema, insomnia, are favorably influenced by caffein; only the latter is not always reduced by it. On the contrary, I have read of cases, and have met a few myself, in which caffein produced rather than relieved insomnia. Still, it is possible that the doses were too large in the individual cases. The main indications for its use are heart diseases of the class in which digitalis is recommended, besides renal hyperæmia, and nephritis complicated with cardiac affections, and cardiac debility depending on the primary or acquired muscular weakness of the heart muscle.

The stomach, the rectum, and the subcutaneous tissue tolerate and absorb it quite well. For the two first I have mostly used the citrate, in some cases the bromide. For hypodermic administration I have employed, for the last four or five months, the salicylate or benzoate of caffein and sodium, which, together with the cinnamylate, were introduced into practice by Rossbach in the Congress for Internal Medicine held at Berlin, April, 1884. The latter salts are soluble in water in a proportion of one to two, and eight or ten drops of the solution contain a powerful dose for an adult. . . . .

I have seen a speedy effect, both in adults and children; thus, my experience with it gives me the courage to recommend it for further experiments and more extensive administration.

I shall go no further. It is self-understood that alcoholic stimulants find their place easily. They must not be delayed until increasing debility is clear to the very beginner. Also that liquid and digestible food must be given in regular intervals, and usually more than the patient asks for. Also that bleeding from the intestinal ulcerations requires ice and compression externally, bismuth, opium, alum, lead, perchloride of iron; also ergotin in subcutaneous injections. May be that Unna's keratin capsules will in future do good in hæmorrhages as well as ulcerations of the small intestines. Finally, I need not say that collapse requires speedy and powerful interference—mostly by subcutaneous injections, if the quickest possible effect is aimed at—of alcohol, camphor in alcohol or ether, or oil, camphor and caffein.—*Archives of Pediatrics, March*, 1885.

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## LECTURE.

### CLINICAL LECTURE ON REPEATED PREMATURE LABOR FROM PROBABLE FATTY DEGENERATION OF THE PLACENTA. Delivered at the College of Physicians and Surgeons, New York. By Prof. T. GAILLARD THOMAS, M.D.

GENTLEMEN: The case which I now bring before you is one of unusual interest, and the history which the patient gives of herself is a very sad one. Her name is Mrs. Elizabeth L——. She was born in the United States, is twenty-two years old, and has been married four years. She has given birth to four children, but every one of them has been still-born. The account that she gives of them is as follows: None of them were born at full term, and the period of gestation at which labor occurred in the four cases was respectively, seven months, six and a half months, eight and a half months, and eight months. Unfortunately, in these various confinements she was attended, not by a regular physician, but by a midwife, but neither the midwife nor herself ever noticed that there was any diseased condition or peculiar appearance about any of the dead children. The patient has always enjoyed good health; and this is the whole history of the case, with the exception of the fact that she is now four months pregnant again; in consequence of which she applies to us to see if medical science cannot do something to prevent the recurrence of the melancholy termination of gestation, which has hitherto continually marred her married life. This is the problem which we have presented to us to solve, and it is certainly one worthy of our most careful attention.

In the early part of pregnancy there are, setting aside accidents, two great causes which most commonly account for miscarriage. These are syphilis and retroversion or retroflexion of the uterus. For premature labors there are also two prominent causes, viz., syphilis and fatty degeneration of the placenta; the latter occurring without any assignable reason. Laceration of the cervix comes under the category of accidents, and barring out this class, I know of no other cause. In such a case as this, therefore, you should always examine the patient with the greatest care for specific disease. Here, however, the woman has not the slightest indication of any syphilitic trouble about her, and, as far as we are able to make out, the husband also seems entirely free from any such suspicion. The history of these repeated premature labors points plainly, then, to fatty degeneration of the placenta as the cause. We have no means of finding out with absolute certainty at present, as, of course, this could only be demonstrated by a microscopical examination of the placenta; but there is, as we have seen, no other cause, except syphilis, that would satisfactorily account for the history.

If we had found the history or symptoms of syphilis, we would place the patient at once on anti-syphilitic treatment. The method which I prefer in such cases is that by inunction, and the preparation which I am in the habit of using is the ordinary mercurial ointment, which is to be rubbed now into the axillæ and now into the groins and inner surface of the thighs. The husband should also be put through a regular course of anti-syphilitic treatment if there are any indications of the disease about him.

Fatty degeneration of the placenta, in my experience, occurs without any assignable cause, and usually in women who are apparently in most excellent health. When there is reason to suspect the presence of this condition, there is but one thing that can possibly save the life of the child, and that is the induction of premature labor. In the present instance, therefore, when the child in utero gets past the seventh month, it ought to be delivered at once. In the past only one child out of the four has died as early as six and a half months, and so there is every prospect of saving this one. When there is fatty degeneration of the placenta the mother can tell when the fœtus is about to die on account of the diminished activity of its movements. In about a week from the time this is first noticed the movements will cease altogether, unless labor is brought promptly on in the meanwhile, and the child will have died of apnœa, due to an inadequate supply of oxygen. The induction of premature labor is now no longer a doubtful process but a perfectly certain one, and attended by no more danger than parturition at full term. In fact, there is even somewhat less danger than in normal labor, on account of the smaller size of the child's head. As to the exact time at which labor should be brought on in this case, that must depend somewhat on the condition of the child, as indicated by the fœtal movements. If the child seems to be growing feeble at seven months, I would advise that it should be done then ; but if there were no such indications, I would wait till seven and a half months, when the operation should certainly be performed under any circumstances.

*The method of inducing premature labor*, which I now invariably adopt is a very simple, and, at the same time, a perfectly efficient one. The patient is placed across the bed, with the buttocks resting near the edge, and under her is arranged a large piece of rubber or oil-cloth in such a way as to drain into a tub below on the floor. In this tub we put one or two gallons of water of a temperature of 98°. The operator stands between the thighs of the patient, whose knees should be properly supported, and employing a syringe with a long nozzle, which is carried up as far into the cervical canal as it will go, he keeps up a steady stream directly against the membranes. In the course of ten minutes the os will be the size of a silver half-dollar, and when dilatation to this extent has been accomplished, he is to insert a gum catheter between the membranes and the uterine walls. The patient is then put in bed, and that is all.

It may be asked whether, when there is fatty degeneration of the placenta, there is any kind of medicine which, if given to the mother, is capable of prolonging the child's life. In this condition Sir James Simpson was in the habit of administering chlorate of potash, on account of the large amount of oxygen which it is known to give off when taken into the system and decomposed. There is, at all events, no harm in trying this plan, as the drug can be given in very large doses with impunity. It is perfectly safe to give it in drachm doses ; but I would not advise its being carried beyond this. It is well-known that a medical man of this city unfortunately lost his life by taking an ounce of it at once, in order to demonstrate in his own person that no bad effects resulted from its use even in enormous quantities. In some cases that have been under my observation, the drug really seems to have facilitated the process of oxygenating the fœtal blood. It should never, however, be relied upon as a substitute for the induction of premature labor. This operation constitutes one of the greatest advances that have ever been made in the obstetric art, and it is certainly no mean triumph to be able thus to preserve a human life which, without its aid, would have been inevitably lost. I can point to at least two dozen children in this city, who by this means were saved from an untimely fate. When the infant has been delivered before full term, it should not be washed and otherwise treated in the ordinary manner of nurses, but should be carefully wrapped in warm cotton and allowed to remain in it ; the temperature of the room in the meanwhile being kept up to nearly one hundred degrees.—*Philadelphia Medical and Surgical Reporter.*

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# ORIGINAL ABSTRACTS.

Continued Malarial Fever.—In the *Nashville Journal of Medicine and Surgery* for March, 1885, Dr. B. Frank Humphreys says: The old authors of two or three decades ago virtually held to the theory that cinchona is a specific for all malarial fevers, and not a few practitioners of the present day hold to the same views yet. If it failed to cure a fever, they concluded it could not be malarial, but some kind of *ignis fatuus*, over which the specific had little or no influence. Continued malarial fever is ushered in very much like the other climatic fevers, except there is often no pronounced chill, nor is there a remission as in ordinary remittent fevers. There is no perfect remission or absence of fever until the disease has run its course, from two to six or eight weeks. Very rarely is there any delirium, the mind remaining perfectly clear until the last. Sometimes we see a case a few days before death, after a lingering illness, when the mind seems to be confused and not entirely rational. Having had this fever twice myself, I remember everything that occurred during my illness. The temperature never went much above 103°. I was much troubled at times in my dreamy meanderings. It appeared to me, while wide awake, that my residence had been moved miraculously, like Aladdin's palace, to a distant location; and, with eyes wide open, I took in the situation and wondered why the removal had been made. Otherwise, I was perfectly rational all the time. The tongue usually has red tip and edges, with a very heavy yellowish white coat in centre—what may be called a very foul tongue; very often the tongue is quite clean, and of a deep red color, dry and cracked. The bowels are usually constipated, though sometimes a diarrhœa prevails, consisting of a yellowish watery discharge; at other times there is violent hæmorrhage from the bowels, after the disease has progressed several weeks. The pulse is variable; sometimes very bold, full and strong, 120 to 130 or 150 per minute; at other times it is small and very rapid, 130 to 140 per minute. It is not unusual, however, to find a soft, open pulse, which rarely exceeds 90 or 100, indicating a mild attack. The temperature runs very high. Sometimes it does not exceed 103°, and occasionally it ranges between 100° and 102°. More frequently, however, the morning temperature is 103° or 104°, while the evening pyrexia is accompanied with a temperature of 105°, and not unfrequently it runs as high as 106°. Here is where the danger lies, and doubtless death is due to this cause in a large percentage of the cases. It is so unlike typhoid that I wonder why such a term as typho-malarial was ever applied to this fever. There is not the hebetude, typhomania, muttering delirium, picking at the bed-clothes, subsultus, characteristic diarrhœa, low temperature, somnolence, specific eruption and other symptoms of typhoid fever. Like wild-fire the temperature rises higher and higher each day, very rarely presenting any of the unmistakable symptoms of typhoid fever mentioned above. The lungs in many of the cases become involved, and a true pneumonia, either croupous or catarrhal, accompanies the fever. Most frequently, however, it is the latter. The using of cold water too freely and indiscriminately, by sponging or bathing, and the drinking of ice-water to excess, seem to have produced the pulmonary trouble in many instances. The eating of solid indigestible food seems to have produced serious diarrhœa, and even hæmorrhage from the bowels, when the patient was almost convalescing, with a temperature nearly normal. I have seen fatal lung and bowel complications apparently arise from the causes referred to above. This fever is seen most frequently during the months of autumn, but it is also very prevalent during the heat of summer. It may prevail even in midwinter. There is no locality entirely exempt from this fever. This leads me to inquire into the etiology of the fever, which is a problem I do not feel able to solve. I was apparently in good health each time I contracted the disease. The first attack followed very soon after a ten-mile ride on horseback, at mid-day, in August, when the thermometer marked nearly 100° degrees of heat in the shade. I returned through the heat soon after my arrival. This seemed to be the exciting cause of the fever, while, doubtless, the malarial influence which had surrounded me all summer was the perpetuating cause of the fever. The other attack came on more insidiously in autumn, after exposure at night, and after a fast of twenty-four hours. In fact, nearly all cases can be traced to undue exposure and overwork as the exciting cause. Why, then, call this fever malarial? With equal reason it may be asked, Why call an intermittent fever malarial? The fact that quinine controls an intermittent and does not control the continued fever proves nothing. It is just as probable that the latter is of malarial origin as the former. Treatment: If quinine, as has been supposed, is specific for all forms of malarial fevers, there would be but little necessity for any remarks upon the special treatment of this fever. That quinine is powerless in breaking up the fever under consideration, there is abundant evidence from experienced physicians who have treated hundreds of cases. Having failed so signally, after a bold use of this drug, many physicians have discarded it altogether, substituting instead whatever remedies seemed to be most available, many times only to see the fever progress in the even tenor of its way to a fatal termination. The milder cases, when the temperature does not rise above 103°, or when it varies from 100° to 102°, with all the other symptoms of a mild attack, may run their course, without therapeutic interference, and terminate favorably. It is the more violent attacks which require special attention. A morning temperature of 104° or 104½°, followed by an evening exacerbation of 105° to 106°, should impress any reasonable physician that such a high temperature, in daily succession, will soon produce irreparable lesions, which sooner or later must terminate the life of the patient. How often, too, has the faithful physician watched this consuming temperature in its daily march, and endeavored, with all the means at his command, and with all the aid he could obtain by consultations, to check the raging heat to which his patient at last had to yield up his life! How earnestly, while thus situated, has the devoted physician desired a safe and certain antipyretic! What a boon, more precious than gold or diamonds, would such a remedy have been in the hour of distress, when the vital spark was waning! While we have means by which the temperature may be reduced, we have but few, if any, which are always absolutely safe and certain. It is not necessary to adopt a routine treatment, as each case will require such remedies as the symptoms may demand. If called at the beginning of the attack, and if the tongue is heavily coated, accompanied with constipation, remedies should be given to arouse the hepatic secretion, and nothing seems better for this purpose than moderate doses of calomel, or the calomel parvules, repeated as may be necessary; or the podophyllin parvules may be used when there are objections to mercury, as some persons cannot take the latter without being ptyalized. Further than this, the bowels should not be disturbed unless there is obstinate constipation, which may be overcome with enemas and the cascara cordial. The circulation requires our constant attention. There are a few remedies upon which I rely with much confidence. Veratrum viride, as prepared for many years by Dr. Norwood, has long been a favorite remedy with me in this as in all other fevers requiring a reliable remedy to control the circulation. The first week may require two or three drops, every hour or two, until the circulation is under control. Further on, one drop or less, repeated as above, may be sufficient; but enough should be given to accomplish our purpose, for we should not make a failure through timidity. I usually give the veratrum in combination with nitrous ether. I have never observed any ill effects follow a judicious use of this drug. Quinine may be considered our sheet-anchor in continued malarial fever, when a very high temperature prevails. It will not abort the attack, as in simple intermittent or remittent fevers; yet, if given in the proper manner and quantity, it will reduce the temperature to a degree of toleration and safety. The temperature must be kept down to a degree of toleration and safety, even if it requires sixty grains of quinine, or more, at a single dose, or divided into two or three doses, repeated every hour or two. Usually twenty to thirty grains, given at a single dose, reduces the temperature sufficiently for a day or two; when the fever rises again above 103° the quinine must be repeated as before. When the patient cannot tolerate quinine, some of the nervous sedatives will have to be used instead. Nitrous ether, gelsemium and aconite make a good combination—one-half teaspoonful of the nitre, five drops tincture gelsemium and one drop tincture aconite root, in a wine glass of water, every two or three hours, has very often answered every purpose as a febrifuge. Iced lemonade and similar cooling drinks are very pleasant and agreeable to the patient, but care should be exercised in this matter, as in other measures, so that too much may not be given. Sponging the patient with tepid, cool, or cold water is most grateful to the sufferer, and it would seem unkind to deny them this comfort; yet it has appeared to me that a too constant application of cold water was followed by an aggravation of the symptoms. A slight reduction of the temperature follows the cold sponging, which, however, does not last long. I have no experience in the use of the cold bath. It occurs to me that the good thus obtained, for so short a time, is more than balanced by evil, on account of the frequent disturbance of the patient. The milk diet is to be preferred above everything else. Wine or brandy may be given, regardless of the fever, when the patient is greatly reduced or inclined to use stimulants. Milk-punch, egg-nogg, or light wines may often prove not only agreeable but beneficial during the progress of the fever, or as soon as convalescence begins, when some suitable tonic may be given until the patient fully regains his usual health.

MALARIAL HÆMATURIA OR SWAMP FEVER.—C. M. Thompson, M.D., in the *Nashville Journal of Medicine and Surgery*, says: Malarial hæmaturia is *per se* a malarial disease, but affecting the system quite differently (as the symptoms would indicate) from any other form of malarial cachexia. By the comparison of some disease which in symptoms resembles nearest the one under consideration (and probably differs only in degree), we may be enabled to arrive at a rational conclusion as to the pathology of swamp fever. I think we have this disease in jaundice. In malarial hæmaturia the secretory function of the liver is evidently not at fault; the system is loaded with bile. To excrete this seems to be the object aimed at by nature, and she has one other emunctory outlet at her command, the kidneys, which organs, in all circumstances in which the liver is unable from any cause to perform its excretory function, perform that function. That the kidneys are in this disease performing the excretory function of the liver is and has been demonstrated by chemical analysis of the so-called hæmorrhage from the kidneys in swamp fever, which chemical analysis shows the discoloration of the urine to be due to the coloring matter of the bile, bilirubine and biliverdine. From what cause has the liver failed to perform its physiological function? Remote cause, malaria. Immediate cause, catarrhal inflammation of the mucous membrane of the cystic duct, causing mechanical obstruction to the excretion of the bile. As to the diagnosis of swamp fever but little need be said. While we do not have all the symptoms well marked in each case, the prominent symptoms of this disease are so pathognomonic in their character, that, having once observed a case, we may have no fears of afterwards being misled. In some cases the biluria is the first prominent symptom to make its appearance, in others the bronzed condition of the skin. Like all malarial diseases, it is ushered in with a chill, slight febrile exacerbation, the temperature rarely rising above 105° ; the chills recurring daily, with the skin becoming more deeply bronzed at each recurrence of the chill ; also the urine becoming more highly colored. Nausea and vomiting are present in all cases, the matters vomited being of a yellowish-green or black color in fatal cases. The urine is voided in large and increasing quantities in cases which terminate in recovery ; in smaller and decreasing quantities in fatal cases, becoming very dark and thick, too viscid to be withdrawn from the bladder by a catheter, the patient rapidly sinking under uræmic poisoning. Treatment: Swamp fever or malarial biluria being a malarial disease and confined to and occurring only in malarial districts, sulphate of quinine as a malarial specific par-excellence must be used in sufficient quantities to control the periodical recurrence of the chill. Tincture gelsemium from the green root has a happy and curative influence in this disease ; hypophosphite of soda is given with benefit in the first stage of the disease ; lemonade prepared from the fresh fruit or from citric acid should be given in large quantities. Calomel is not indicated by the pathology of the disease. Admitting that calomel increases the secretory function of the liver, this function is evidently being performed, which is shown by the bronzed skin, conjunctiva and all the observable tissues of the body. To increase or stimulate this function will only increase the mischief; to aid nature in excreting the deleterious bile from the blood is the office of the physician in the class of cases the cause of which is mechanical obstruction to the excretion of the bile. Diuretics should be given with extreme caution, if at all. The kidneys are excreting and passing through their excretory apparatus materials foreign and stimulating to them ; to further stimulate them by diuretic medication would be to cause them to fail in their function of excretion ; a result fatal to the patient. From the very restless condition of the patient, opium would seem desirable ; but we should be deterred by the knowledge of its restraining effects on the excretions in general, and especially on the excretions of the liver.

Large Abscess of the Liver Opened by Trephining the Ninth Rib ; Recovery.—In the New Orleans *Medical and Surgical Journal* for March, 1885, F. W. Parham, M.D., Hotel Dieu, reports : The patient, a gentleman 26 years old, was placed in the Holel Dieu, New Orleans, under the care of Prof. T. G. Richardson, M.D., November 29, 1884. Diagnosis : Hepatitis, with probable suppuration ; treatment, tonic and supporting. December 9.—Examination of liver at this date showed increased bulging, and fluctuation was detected in lower intercostal spaces. A hypodermic syringe showed pus ; a Dieulafoy's aspirator was used in ninth space, bringing away 560 c.c. (nearly 18 ounces) of typical hepatic pus, unmixed with blood. Though the long needle moved freely in the liver, no more fluid could be drawn out. December 12.—There was improvement for twenty-four hours, when the temperature again began to rise. Patient complained much of pain in side, and could not sleep. The liver still bulging, a second aspiration was made on this date, drawing away 480 c.c. (nearly one pint) of pus, very much thinner, containing a large proportion of serum. Only temporary improvement. December 15.—Aspiration No. 3, 480 c.c., pus thicker. December 16.—Condition much worse, patient rather dull, very restless, complaining seriously of liver-pain. December 17.—This morning, condition worse than ever. It was now very clear that patient must soon die unless something else could be done. Believing that the one thing alone that could produce any favorable change in his condition was the establishing of thorough drainage of the abscess, Dr. Richardson determined to make a free opening. Accordingly, on December 17, the patient having been etherized, an incision was made in the ninth intercostal space. Some thick pus escaped, but with such difficulty, owing to the closeness of the ribs, that it was determined to remove a section of rib by the use of the trephine. For this purpose skin was dissected from the ninth rib, and a disc, including the whole breadth of the rib, was taken out without difficulty. A large opening, including the ninth rib and a part of the eighth and ninth intercostal spaces, about one inch anterior to the mid-axillary line, was the result. A large quantity of pus (not measured) of the consistency of jelly poured out. It was so thick that it could not possibly have been evacuated through any aspirator. The index finger was quite easily introduced, and the clinging pus and broken-down tissue separated from the abcess walls and thoroughly washed out with a warm three per cent. solution of carbolic acid. In the evening the temperature had fallen to the normal line. The washing was repeated. February 13.—Condition good, but not much gain over previous weight. The wound has practically healed, leaving a dent in side from drawing in of cicatrix. Still some tenderness over liver, especially near ensiform cartilage, but nothing indicates any unfavorable course as probable. Liver extends a little below costal arch. Is in good spirits, and expects to leave for home on the 16th of February. Comments: This case, which can be fairly claimed as one of cure, shows clearly what may be accomplished by surgical interference in even apparently hopeless cases. The points of especial interest are: 1. The total inefficiency of even the best aspirator in evacuating similar abcesses. 2. The value of the ordinary trephine, permitting the rapid making of a large opening. 3. The thorough and frequent cleansing of the cavity of pus and broken-down tissue by means of the finger and washing, which in this case was accomplished with an ordinary Davidson's syringe.

TWO CASES OF HYDROCELE IN THE FEMALE.—Mr. Samuel Osborn, F.R.C.S., reports in the *Lancet* (March 7) two cases of this character. Both women were admitted as out-patients to the Hospital for Women, Soho square, London, within a few weeks of each other, and were sent to him as supposed cases of irreducible hernia. The first case was one of hydrocele of the femoral canal, and of greater rarity than the second, which was one of the canal of Nuck. Case 1.—A married woman, aged 30. The tumor, which was first noticed seven or eight weeks before she came under observation, and which gradually increased in size till it became as large as a hen's egg, was exactly in the situation of a femoral hernia. It was soft, with no impulse on coughing; there was indistinct fluctuation, and, although transparent by transmitted light, it was somewhat difficult to obtain this means of diagnosis by reason of its situation. On July 9 the swelling was tapped, and a clear yellow fluid evacuated. A femoral truss was applied to keep up pressure upon the walls of the cyst, after they had been well rubbed together, and the patient returned to her home in Essex, and kept to her bed for a week. Three weeks from the date of the tapping the cyst refilled, and became the same size as at first. On October 10, the patient being in bed, the cyst was tapped, and, the walls having been thoroughly manipulated, tincture of iodine was injected. This occasioned momentarily great pain, and the cyst was allowed to empty itself of the injected fluid. An ice-bag was applied, and kept on continually for three days. Slight inflammatory swelling took place, but this soon subsided, and she got up after ten days, wearing her femoral truss; the swelling had entirely disappeared. On December 4 there was no return of the swelling, and the use of the truss was discontinued. Case 2.—Jane P., aged thirty-five, single, had noticed a lump in the right groin for seven years, which had gradually increased in size. The swelling was the shape and size of a large pear, with the stalk pointing downwards to the labia; it was transparent by transmitted light, with no impulse on coughing, and no alteration in size when lying down or after a night's rest. On September 11 the cyst was tapped, and rather more than half a pint of canary-colored fluid withdrawn. The walls of the cyst were well manipulated by rubbing the two internal surfaces together. An ice-bag was applied for some four or five hours, and, a right scrotal truss having been applied, she was allowed to return home, and ordered to keep her bed for three days. This she did, but immediately she commenced to go about the swelling returned, and became as large as ever. On November 6 the patient was admitted into hospital, and, the cyst having been tapped, about forty minims of Morton's solution were injected. On the 7th she complained of much pain in the lower part of the abdomen and in cyst. A considerable quantity of clear fluid came from the puncture during the night, soiling the linen and rendering it quite stiff. By the 9th the swelling had increased in size, being tense and red, although the pain was less. A trocar was inserted and about four ounces of clear claret-colored fluid were evacuated. On the following day the patient felt much relieved; a considerable quantity of fluid had escaped during the night. On the 18th the cyst was nearly the same size. It was again tapped, and the fluid, which came away with difficulty, necessitated the cyst being well squeezed to thoroughly empty it. A certain portion of the swelling remained, as if partially solidified. About half a drachm of tincture of iodine was then injected, and a flannel spica bandage put on and an ice-bag. On the 22d the ice-bag was discontinued. Swelling still present, but about half the size it was originally; no fluctuation, and apparently solid; pad and firm pressure applied. On the 27th the swelling was much less; pressure was still kept up by means of a spica bandage, and a small piece of mercurial ointment was placed on the swelling previous to the bandage. She left the hospital on December 11 quite cured; no sign of the swelling remained.

Three Cases of Sarcoma of the Testis; Castration; Recovery.—The *Lancet* of March 7, 1885, reports three cases of sarcoma of the testis, with castration and recovery, under the care of Mr. Sidney Jones, at St. Thomas's Hospital, and makes the following remarks in regard to them: The importance of diagnosis in cases of enlargement of the testis is very great, for *early* removal of malignant disease is a large factor in the ultimate result aimed at—namely, complete cure. It is, however, difficult in the early stage of enlargement of a testis to give a decided opinion, and in many cases even the best authorities can give no definite diagnosis until various remedies have been tried and the tumor punctured; the latter with a view of examining the fluid withdrawn and any growth brought away in the cannula. Our readers will recollect that the chief difficulty at the commencement is to diagnose the disease from chronic inflammation of the body of the testis, and later from chronic hydrocele and from hæmatocele; and this task is rendered more difficult when the attention of the patient has been first directed to the diseased organ by a blow or other injury, as in two of the cases recorded by Mr. Sidney Jones. A progressive solid enlargement of the body of the testis, without evidence of inflammation, the surface being of unequal consistency, with dilatation of the scrotal veins, should always be looked upon with suspicion, more especially if treatment proves of no avail in arresting the increase of the growth.

Locomotor Ataxy, without Disease of the Posterior Columns of the Spinal Cord.—Dr. A. Hughes Bennett has reported to the Clinical Society of London a case of this kind (*British Medical Journal*, March 7, 1885). The patient during life presented all the prominent symptoms of tabes dorsalis, while after death the posterior columns and cornua of the spinal cord were found without a trace of disease. From this fact important physiological and pathological conclusions were drawn. The patient, a man, aged 48, suffered from all the usual symptoms of locomotor ataxy, including inco-ordination of movement, without loss of muscular power, a typical ataxic gait, Romberg's symptom, impaired and retarded sensibility of the lower extremities, lancinating pains, and loss of the knee-jerk phenomena. After death evidences of general acute cerebritis were found, with patches of recent softening. In the medulla oblongata there was a mass of sarcomatous infiltration occupying its posterior and central aspects; with the exception of one anterior cornu in a limited portion of the lumbar region, the spinal cord was perfectly normal throughout, as were also the posterior cornu, and roots within the circle of the spinal membranes. Outside these, the posterior roots in the dorsal and lumber regions were found involved in a mass of sarcoma, which extended as far upwards as the cervical portion of the cord. In the lumbar region the anterior roots were implicated, but only to a very limited degree. Microscopic preparations and drawings illustrating these facts were shown at the meeting. In commenting on this fact special attention was directed to the pathological and clinical phenomena. It was pointed out that the patches of central softening were probably quite recent, and due to the acute cerebritis, which supervened shortly before death. The sarcomatous growth in the medulla was stated to be a rare pathological condition; and the absence of pronounced bulbar symptoms was explained by the supposition that the morbid material had infiltrated the normal structures, without causing their serious degeneration. Although one anterior horn was implicated, and some of the anterior roots slightly involved in the disease, it was evident that this had caused few symptoms during life, as the motor power was unimpaired, there was no muscular wasting, and the retinal reactions were normal. The clinical point illustrated by this case, to which it was the object of the paper specially to direct attention, was the relation which existed between the spinal symptoms and the lesions in the posterior roots of the cord. It was pointed out that the patient during life suffered from all the prominent symptoms of tabes dorsalis, and presented a fairly typical clinical picture of what was understood of that disease. It was then stated that the universal belief was, that the essential lesion of locomotor ataxy was sclerosis of the posterior root-zones of the cord. In the case under consideration, there was no trace of disease of any portion of the posterior columns, proving that for the production of ataxy degeneration of the cord was not an essential factor. Reference was made to the cases published by M. Déjerine, in which there were all the symptoms of tabes, and after death only parenchymatous neuritis of the peripheral nerve-endings found, the cord, roots and nerves being intact. From this it was maintained that interruption of the different paths at the periphery was capable of causing ataxy in as characteristic a manner as when these tracts were diseased in the cord. The case under notice showed that lesion of a third locality, namely, of the posterior spinal roots, might produce the same effects.

The Sting of a Scorpion.—In the New York *Medical Journal* of March 14, 1885, Dr. B. F. Hayward, surgeon of the steamship City of Puebla, says: The sting of a scorpion has been regarded by the laity at large and some of the profession as being necessarily fatal, but I had the opportunity a few months since of treating a case which proved to be contrary to the general impression. The case is as follows: The stewardess on board one of the Southern steamers was stung on the little toe of the left foot. Five minutes after it occurred I had the patient under treatment. On examination, I found a white surface of about the size of a half-dime. In the centre was a little red spot, which seemed to penetrate to the bone. At first there was pain, accompanied by swelling of the foot and ankle. She complained of dulness, extending first to the ankle, thence to the knee, and afterward to the hip. The limb was cold, and of a dark color, the circulation being impaired, and it seemed to me as though the blood coagulated in the veins. The pulse was rapid and feeble, the patient restless and fretful, the face pale, with dark lines under the eyes. In a few moments there was a red streak which commenced at the little toe and gradually extended to the hip. I made a cross-incision over the seat of the wound down to the bone, and allowed it to bleed freely, and then applied hot flax-seed poultices. Internally, I gave whisky and the aromatic spirits of ammonia in the proportion of two-thirds and one-third, giving ʒ iv. every fifteen minutes until the patient had taken ℥ vii., and then, as the stimulants commenced to have effect, it was decreased gradually. The next morning the only symptom present was the numbness and heaviness of the entire limb, which disappeared during the day.

Premature Birth Following the Successful Treatment of Morphia-Poisoning by Atropia.—Dr. Edward J. Forster reports the following case in the *Boston Medical and Surgical Journal*, March 19, 1885: September 7, 1884, 1.10 P.M., a young married woman of twenty years was brought to the Boston City Hospital by her husband in an unconscious condition, with the statement that she had swallowed by mistake thirty grains of acetate of morphia. The patient was in a state of collapse, the pupils contracted to the merest pinholes, and the respiration very slow. Half a grain of sulphate of atropia was immediately given subcutaneously. A physical examination was then made. The patient was unconscious, the pupils contracted, not reacting to light. The heart, lungs and abdominal organs were found to be normal. The uterus was found to be extending above the umbilicus one-third the distance to the ensiform cartilage. Dr. W. L. Richardson was able to hear the fœtal heart faintly, above the left groin, beating eighty times to the minute. The temperature was 98.6°, pulse 72, respiration 7. Another injection of one-fourth of a grain of sulphate of atropia was then given, which was followed by dilation of the pupils. She was then treated with flagellation, the application of the faradic current to the phrenic nerve, artificial respiration, carbonate of ammonia subcutaneously, and brandy by enema. It is supposed she took the morphia at 11 o'clock A.M. At 1.30 o'clock the stomach was washed out, and a pint of hot black coffee was poured in through the stomach-tube, and artificial respiration resorted to. A subsequent examination of the fluid from the stomach showed no trace of morphia. At 1.45 the pulse was 150, respiration 4, pupils dilated. At 4, when the pulse was 120 and the respiration 5, one-fiftieth of a grain of sulphate of strychnia was given subcutaneously as a stimulant to the respiratory centres. At 8 P.M., pulse 128, respiration 10; had involuntary dejection, and asks for drink. At 10 P.M., pulse 124, respiration 14; talks, and drinks milk. At 2 A.M., September 8, pulse 122, respiration 18; some twitching of hands and arms. At 6 A.M., pulse 116, respiration 28; she vomited. During the night she took four pints of milk. At 9 A.M. she was quiet and comfortable, but very thirsty, legs tender, swollen and discolored from the flagellations. At 11 o'clock, while making the morning visit, an accumulation of fœcal matter and liquid, which proved to be liquor amnii, was found in the bed. Before a vaginal examination could be made, she uttered a sharp cry and gave birth to a six months' male fœtus, breech presentation, the head being delivered without difficulty. The convalescence was nearly normal. The child breathed a few times immediately after birth; he was placed in hot water, then in hot cotton, and artificial respiration continued for half an hour. The respiration and pulse grew slower and feebler, until both ceased thirty minutes after birth. The child was well-formed, fifteen inches long; one testicle could be felt in scrotum; pupillary membrane still present.

Surgery of the Stomach.—In concluding an interesting article on the surgery of the stomach, in which it refers to the various procedures which have been proposed for the relief of cancer or other tumor, non-malignant contraction of the pylorus, etc., the *British Medical Journal* of February 21, 1885, says: It appears reasonable to advocate the mildest remedy likely to be of any avail in any of the above cases. If washing out the stomach prove beneficial, when continued for months or years, that practice should alone be deemed sufficient. If non-malignant stricture of the pylorous exists, and washing out the stomach fails to give relief, it would seem better to undertake the operation of dilatation of its orifices advocated by Professor Loreta than to deprive a man of his pylorus. Yet the advocates of so serious an operation as pylorectomy cannot be blamed for urging its early performance, should malignant disease be reasonably expected to exist.

THE ADVANTAGES OF ABDOMINAL SUPPORT DURING PREGNANCY.—Dr. Alexander Duke, ex-Assistant Master, Rotunda Hospital, Dublin, says in the *British Medical Journal* of March 7, 1885: I always advise patients in a pregnant condition to leave off their corsets (from about the fourth month onward, should I see them at that time), and, having supplied the want of corset by a suitable bodice, to wear a supporting abdominal belt with elastic sides, so as to exercise a comfortable pressure from below on the muscles, and fitted with tapes or straps to relax the pressure as the uterus enlarges. In every case in which I have recommended this to be done, and where my directions were followed, the patient not only expressed herself as feeling far more comfortable, but I have remarked that the subsequent labor was of much shorter duration, owing, I believe, to the support afforded in time to the abdominal muscles, and which, by husbanding their tone and strength, enabled them to assist the uterus in its efforts of expulsion in a marked degree. When engaged to attend primiparæ, I also direct the bandage to be left off at night and the abdomen well rubbed over with fresh lard at bedtime. When this treatment is followed in primiparæ, I find there is little or no trace of the lineæ albicantes to be discovered after the patient recovers from the lying-in, and the abdomen also resumes its natural appearance, which the patient, as a rule, is the first to remark.

INGROWING TOE-NAIL.—Dr. C. C. Yemans says (*Detroit Lancet* for March, 1885): I regard the term "ingrowing toe-nail" as quite misleading and calling one's attention away from the true pathological condition, and as one's practice must depend for its accuracy very largely upon his knowlegde of correct pathology, I think the distinction is worthy of note. Acting upon this theory, that it is the toe which is hypertrophied in most cases, I simply excise from the side affected with a straight knife all that part of the toe protruding above or upward from the nail, leaving the whole surface to be covered by granulation, trusting to the contraction which occurs in healing by this method to draw the pulp inward and under the edge of the toe, so that the nail becomes a protecting roof and not an irritating cause hereafter, whether it be hypertrophied or not; and so the patient is saved from pain and lameness, and able to wear his ordinary shoe without reminding him of the original condition of his toe.

THE MICROSCOPICAL EXAMINATION OF SPECIMENS REMOVED FROM GENERAL GRANT'S THROAT.—Dr. George R. Elliott says, in an article on this subject in the *N. Y. Medical Record* of March 14, 1885, that the great interest of this case, not only to the medical world, but to the public at large, has induced him to describe in some detail the examination of a specimen that exhibits nothing but what is constantly found in an epithelioma of ordinary type that is fully developed. The more or less lobulated appearance of the epithelial mass; the actual existence of some "cell-nests;" the great diversity in the shape of the cell elements; the marked evidences of epithelial proliferation, and the peculiar appearance of the stroma, warrant the diagnosis of epithelioma of the squamous variety. This conclusion has been arrived at, he conntinues, after the greatest possible care had been taken to exclude all possibilities of error; after an exhaustive study of every detail, with a knowledge of the clinical historyof the case, and this, too, with a mind anxious only to find microscopical evidence that the disease was of a benign or innocent nature. Dr. T. E. Satterthwaite, the well-known pathologist, fully corroborates the diagnosis. The article is accompanied by four plates representing (1) epithelial lobule, showing cell-nests; (2) proliferation of epithelial cells; (3) a developing cell-nest; and (4) a cell-nest showing corneous degeneration.

Tape Worm.—Dr. T. B. Fowler, M.D., of Cohocton, N. Y., reports in the *New England Medical Monthly* of March 15, 1885, a case in which he persevered in treatment, notwithstanding a number of disappointments, until a successful issue was finally reached. After ordering the patient a twenty-four hours' fast, followed by a saline laxative, he gave him the oleoresin of male-fern in ʒi. doses, night and morning, for two days, following up the last dose with a full dose of castor oil. The result was the expulsion of fifty feet of the worm by actual measurement. The patient improved rapidly from this time onward until about three months ago, when he discovered more of the joints in his passages. He then put him on his former treatment, substituting the fl. ext. for the oleoresin of male fern. He found the usual doses recommended in the books to be much too small to be effectual, so he doubled the dose, and, as the result, procured about twenty-five feet of the parasite. This time the segments must have been detached still nearer the head than before, the extremity appearing to be about the size of No. 12 thread. The head, however, could not be found. After a few months he came to him for the third time, informing him that his tenant was determined not to be ejected; whereupon he resorted to a remedy that he had seen advertised—Dundas, Dick & Co.'s capsules of male fern and kamala. This remedy had gained the distinction, according to the proprietors' statement, of expelling the worm entire in 4,000 consecutive cases. He gave the capsules in exact accordance with the printed directions, and succeeded in bringing away about the same length of the worm as before, though the head was looked for in vain. He soon found it necessary to order a new stock of capsules, and he repeated their administration as before, with the same results. About this time he came across an article in the Philadelphia *Medical News*, commenting on another article written by Dr. Squibb in the November, 1882, issue of his *Ephemeris.* The article referred to set forth the merits of different remedies of known value in the treatment of tænia, and told the best mode of administration of the same. It laid considerable stress on pumpkin seeds as a tænifuge, and Dr. Fowler resolved at once to try the latter as a last resort. Four ounces of the seeds were well pounded up in a mortar, half an ounce at a time, a little water being added from time to time until the whole was made into a paste, the outer coatings or shells being retained. The trituration was continued until a pint of the emulsion was obtained, the whole quantity to be given in three doses, followed in half an hour by a good dose of castor oil. The patient stood the medicine well, the worm coming away in about half an hour after the oil was given. He was not present at the time, but the patient thought that the part of the worm next the head was much smaller than it had been at any previous time. More than a year has elapsed since then, and he is in perfect health.

Treatment of Cholera.—In an elaborate article on cholera in the *New York Medical Record* of March 7, 1885, Dr. M. A. Pallen says: Patients dying from what is called in the South and West a "congestive chill," but which has been described in the text-books as "Pernicious Intermittent Fever," exhibit all the symptoms usually found in the collapse of cholera, the coldness of the extremities, the washerwoman's hand, the shriveled blue skin, the aphonic voice, the sunken eyes, preceded by diarrhœa and vomiting, with this difference, that in the collapse of cholera there is a sub-normal temperature, whereas in the collapse of pernicious intermittent fevers there is always an increased temperature, going up sometimes to 106° ; but the cause is evidently some poison acting in an analogous manner as does the cholera poison. There is in both diseases some form of poison which produces irritation of the cerebro-spinal centres, and prostration and paralysis of the vaso-motor filaments of the sympathetic nerves. In the pernicious intermittent fever it is attended with congestions and engorgements of the lungs and liver, and general high temperature of the body, which is rarely, if ever, manifested in cholera. No one would attempt now to treat pernicious intermittent fever by means of the exhibition of quinine through the mouth ; but there is scarcely a medical practitioner throughout the Valley of the Mississippi, where the disease is so prevalent, who does not immediately act upon the poison by means of repeated hypodermics of quinine, until the patients rally from what would otherwise be a fatal collapse. How futile to attempt medication by the mouth, to trifle with a disease like cholera, to lose valuable time, when hypodermics may rapidly accomplish the results and prevent the fatal finale! What we need in the treatment of cholera is to know positively beforehand that a patient is to be subjected to an attack. During an epidemic, presumptive evidence becomes almost positive testimony ; and if, under these circumstances, we can manage to administer to a patient such medicaments and restoratives as will keep up the heart's action and the respiratory functions, we might so saturate him with them as to tide him over what would be otherwise a fatal attack. Such a method is generally proceeded with in cases of empoisonment for the bites of venomous reptiles, such as the rattlesnake, the copperhead, the moccasin, and the cobra de capello. Alcohol is now believed to be an antidote to snake-bites, not so much, in my judgment, because it possesses a special solvent antidotal character, but because persons bitten by reptiles can take such large quantities of it ; and it sometimes requires enormous doses to stimulate the heart's action and the respiratory functions. It is this alcoholism which maintains the heart and lungs in their various functions sufficiently long to allow the usual emunctories to get rid of the poison ; or another explanation may be offered in the fact that the poison, not having time to thoroughly overpower and paralyze the cerebro-spinal centres, may be so attenuated by an alcoholic mixture in the blood that it is thrown out of the system in consequence of such alcoholic dilution. Take either definition we may, it is certain that the alcohol keeps the heart stimulated for a sufficient number of hours, in the vast majority of cases, to prevent death. In cholera we have hitherto failed to cure by the administration of remedies by the stomach ; therefore, let us try the hypodermic treatment as offering the most rational methods.

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Removal of a Tight Ring from the Finger.—A novel method of effecting the removal of a ring which has become constricted around a swollen finger, or in any other similar situation, consists simply in enveloping the afflicted member, after the manner of a circular bandage, in a length of flat, India-rubber braid, such as ladies make use of to keep their hats on the top of their heads. This should be accurately applied—beginning, *not* close to the ring, but at the tip of the finger, and leaving no intervals between the successive turns, so as to exert its elastic force gradually and gently upon the tissues underneath. When the binding is completed, the hand should be held aloft in a vertical position, and in a few minutes the swelling will be perceptibly diminished. The braid is then taken off and immediately reapplied in the same manner, when, after another five minutes, the finger, if again rapidly uncovered, will be small enough for the ring to be removed with ease.—*Gaz. des Hop.*

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## HOSPITAL NOTES.

Cases at Charity Hospital, New Orleans. By A McShane, M.D., Visiting Physician.—Jean D., aged sixty-two years, native of France, cook all his life, not intemperate, of medium size, with firm muscles, has a persistent cough. His fingers are deformed and ankylosed from long-standing rheumatism. Cough does not bother him when he is standing; but he has a tickling and pain in apex of right lung whenever he lies down. The pain is referred to the inner half of right clavicle and below. He spits up a small amount of muco-pus. There is flatness on percussion, extending outwards as far as the middle of the right clavicle, and downwards and inwards in a curved line as far as the second intercostal space. The cardiac sounds are reproduced accurately over this area of flatness. The whole area pulsates. Over the supra-sternal notch, a round pulsating tumor can be felt, pressure upon which causes a choking sensation and makes him cough. Over the area of flatness there is no respiratory sound; no vocal resonance. No notable difference between the two radial pulses. The patient has a mitral murmur, which can be heard over area of flatness. Diagnosis: Aneurism of the arch of the aorta pressing upon the lung and giving rise to the cough. D. K., colored, aged thirty-eight, laborer, entered the hospital on February 5, 1885, suffering from double pneumonia. He had been sick some time before entering the hospital. The pneumonia progressed favorably, but his general condition was not good. From the day of his admission, his tongue and teeth were covered with a viscid mucus, quickly drying, and forming hard, dark incrustations. On February 12th his pulse was very compressible; there was a tendency to mental wandering, and the patient seemed to be sinking. He had by this time passed into a typhoid condition. Fifteen minims of tr. digitalis were given hypodermically, and ten minims every three hours by mouth afterwards; whisky was also given in liberal quantities. His condition was better next morning. Early on February 14 a diffused swelling appeared under the jaw on the left side, which was painful upon pressure. I saw him at 10 A.M. His pulse was again feeble and compressible; his breathing wheezy. He coughed up a large mass of muco-pus, and then tried to cough up some more, but this time the stuff was evidently too viscid, for he could get it only as far as the larynx, where it stopped and almost choked him. A tracheal tube, knife, etc., were at once sent for, but when they arrived the patient was somewhat better. As the obstruction was deemed a result, principally, at least, from the presence of viscid mucus in the larynx, warm vapor was directed upon the patient's mouth and nose. The patient expressed and showed relief for some time, but in about an hour the respiration became seriously embarrassed and laryngotomy was performed. Immediate relief was obtained. During the day the swelling under the jaw continued to increase. He became weaker, and died at 8 P.M. The tube remained pervious; he died of exhaustion. At death, the swelling had spread to the right side; it was, no doubt, erysipelas.

RECENT IMPROVEMENTS AT CHARITY HOSPITAL.—The most notable of these is the annex to the Female Department. It was originally designed on plans submitted by Dr. A. B. Miles, house-surgeon, and built under the supervision of W. A. Freret, Esq., architect. It is a comfortably constructed two story and attic brick building, with large, well-lighted and wide corridors; wards ventilated according to modern hospital requirements (1,000 to 1,200 cubic feet for each bed), linen rooms, dining rooms for convalescents, water closets, etc., and heated throughout by improved steam radiators. The building closely joins and forms a continuation of the Female Department, which latter has been raised to the floor level of the annex by an elevation of two feet. The entire foundation is elevated some two feet, and its ground thoroughly laid with the Fletcher sanitary flooring, thus ensuring preservation and dryness. The capacity of the new house is eighty-three beds for women and twenty-four cribs for children. It has been completely and newly furnished at a moderate expense. In connection with its furnishing the Board gratefully recognized that some of the ladies of the city bestowed upon it twenty-four cribs for infants with their full outfit. "By the kindness of his excellency, Gov. S. D. McEnery, the Board has been enabled to place in a tower surmounting the annex, and especially constructed for the purpose, the famous Fournier clock, lately in use at the St. Louis Hotel State House. With its two well-marked, and, at night, illuminated dials, the hospital is dispensing standard time to its inmates as well as the neighborhood. The new house which was opened for the admission of patients, August 25, 1884, is certainly an inestimable benefaction to the women and children. For many years the Female Department was over-crowded, patients grouped in wards without proper discrimination of disease, and children, scattered through the house, were treated under the most unfavorable conditions. . . . . The increased number of wards, however, permits the proper classification of diseases; and, moreover, establishes a separate department for children, a necessity which had existed from the founding of the hospital."—*New Orleans Medical Journal.*

THE "STRATFORD" HOSPITAL, BRANTFORD.—The opening of this noble charity took place on the 19th of February, and was made the occasion of a very interesting gathering. Among those present were Lieutenant-Governor Robinson, of Ontario, and Mrs. Robinson; Colonel Denison, Judge Sinclair, Dr. Charles O'Reilly, Medical Superintendent of the Toronto Hospital; Dr. W. T. O'Reilly, Inspector of Prisons; Mayor Scarfe, of Brantford, and others. The ceremony of presenting the hospital to the city was performed by the Lieutenant Governor. An address was read by Mr. Stratford, the donor, welcoming the guests and referring to the substantial character of the building and its adaptability for the purpose intended. There will be accommodation for from forty to fifty beds. The building is well appointed in every respect, and especially as to bed-space, sanitation, drainage, etc. He publicly acknowledged the receipt of many valuable suggestions from Dr. Charles O'Reilly, of the Toronto Hospital; Dr. Digby, of Brantford, and others. One of the conditions of the gift is as follows: The management of the hospital shall be strictly non-sectarian in its character, and the institution be open to all citizens of the city, subject, of course, to the rules that may be laid down hereafter for its conduct; that no clergyman, priest, or member of a religious sect or other society shall hold religious or other services within its walls or grounds, except a patient shall request the attendance of such, and then only for that patient's personal benefit. The Mayor thanked the donor in the name of the city, and the Governor, after some appropriate remarks, declared the hospital opened. At the conclusion a reception was held, and the visitors exchanged cordial greetings with the citizens. The band of the Dufferin Rifles furnished the music for the occasion. We cannot conclude our remarks without again referring to the noble generosity which prompted this act, and it is to be hoped that the example will be followed by wealthy and benevolent persons in other cities in Canada.—*Canada Lancet.*

# PROCEEDINGS OF SOCIETIES.

[NOTE.—The weekly medical journals very properly publish the proceedings of societies as soon as the societies adjourn. This journal being a monthly cannot, of course, do this; it will publish, therefore, only such carefully obtained proceedings of American and European societies as are most interesting and instructive.—ED.]

HARVEIAN SOCIETY OF LONDON. Meeting held Feb. 5th, 1885.

Mr. Cowell read a paper on

### PURULENT OPHTHALMIA IN INFANTS.

This subject had for its special aim to show that the large amount of blindness due to this disease (constituting one-third of the cases of blindness in this and other European countries) could be avoided if (1) the people could be instructed as to its dangers, and if (2) medical men universally recognized the futility of only temporizing measures. The action of the Ophthalmological Society and their recommendations for checking the disease were a move in the right direction; but their appeal to the President of the Poor-law Board had not been successful owing to some practical difficulties of time and cost. It was therefore likely that the burden of the fight against this evil must fall upon the members of the profession. This great object could best be attained by unremittingly and by every means endeavoring to diffuse a knowledge of the disease and of its dangers through the dispensaries, the clubs, the lying-in institutions, and the visitors of the sick poor. Prophylaxis was the next duty. Why should not antiseptic precautions form part of the routine of every lying-in case? In respect of treatment, the first essential was that no time should be lost. The indications were (1) to remove the conjunctival discharge as rapidly as it formed; (2) to relieve tension; and (3) to watch and treat the complications. In addition to the usual rules of treatment, Mr. Cowell recommended that the affected eyes should be cleansed every quarter of an hour with weak antiseptic lotion, and the conjunctivæ painted with from four to six grains of solution of nitrate of silver daily in severe cases, twice or thrice a week in mild cases; the free solution being washed away with antiseptic solution. Where there was much discharge alum or boracic acid might be added to the lotion. The cul-de-sac under the upper eyelid required careful washing out. The ablutions might be less frequent during sleep, and gradually diminished as the discharge lessened. When severe chemosis occurred early scarification was necessary. Mr. Juler inquired whether severe cases could be diagnosed early from milder ones. He quoted some investigations of Dr. Widmark (*Revue Générale d'Ophthalmologie*, September, 1884), in which twenty-two cases of purulent conjunctivitis had been examined (four adults and eighteen infants). Bacteria, described as gonococci, were found in the majority of these cases in the fluid, on the pus cells, and on the epithelial cells. In the adults he discovered gonococci in the urethral secretion, and in the infantile cases in the urethral discharge of the mother. The gonococcus was absent in six of the infantile cases which ran a mild course. Mr. Juler exhibited a specimen of bacteria which he considered identical with gonococci. The antiseptic solution used for the ablutions should be weak (½ per cent. carbolic or boracic acid). The conjunctivæ, if severely swollen, should be freely scarified, and if eversion of the upper lid were impossible the outer canthus should be divided. Mr. H. Power, speaking from the experience of the ophthalmic department of two large institutions, would have mentioned 10 to 15 per cent. only as the percentage of blindness due to ophthalmia neonatorum. The discovery of the gonococcus was due to German observers, who had long forestalled the observations which had been mentioned. Independently of prophylactic measures, which should not be neglected, the eyes of infants were generally protected by the agglutination of the palpebræ. When due to gonorrhœa, cases were likely to do badly unless they received skilled treatment early. On a wide average, cases, if seen in the first week, would recover; if in the second week, they would run a dangerous course; if in the third week, they were hopeless. Ablutions practised every hour or every two hours, were sufficient as a rule; but it was important to remove the stringy precipitate which generally adhered to the margin of the lid after the application. As a disinfectant, half a grain of nitrate of silver to the ounce was an appropriate strength; for the purposes of stimulation two grains to the ounce should be used. Scarification was strongly deprecated, and division of the canthus was seldom requisite and most undesirable. Dr. Alderson mentioned a case in which he had with great success, but not without pain to the patient, insufflated a dose of calomel into the conjunctival sac. Dr. Blenkinsop, in his former experience as obstretric assistant to St. George's Hospital, had found the use of a lotion of sulphate of zinc (two grains to the ounce) generally successful. One or two of his cases only were, however, gonorrhœal. Dr. M. Handfield Jones considered that the severity of the cases entirely depended upon the nature of the vaginal discharge. This was well illustrated by the irritation of the tissues of the vulva by gonorrhœal and uterine inflammatory secretions as compared with the absence of irritation in the ordinary cases of leucorrhœa, even of long duration. Dr. F. A. Hill was puzzled to find specialists at variance on important points of treatment. In his own hands treatment by frequent ablutions had been very successful. Dr. Silcock was convinced of the importance of systematic ablutions; sleep should be interrupted for that purpose. Pure iodoform and pure boracic acid, among other remedies, had been tried at Moorfields, but the old-fashioned treatment by nitrate of silver had been finally resumed. Scarification was necessary in some cases, and should be employed. Dr. C. Wells used an antiseptic application of spermaceti and vaseline with thymol at ordinary temperatures, but easily soluble by warmth or in water, would be found a useful prophylactic for surgeon and patient. Mr. Cowell, in his reply, strongly insisted upon the curability of all cases if seen sufficiently early, and if treated by frequent ablutions and by stimulant applications. The first week appeared to him to be the critical period. Scarification relieved threatening ulceration more quickly than any other method, but division of the canthus might be termed a barbarity except in a few isolated cases.—*Lancet.*

THE PRACTITIONERS' SOCIETY OF NEW YORK. Stated meeting, February 6, 1885.

A discussion was opened upon the subject of

### PRACTICAL CONSIDERATIONS REGARDING THE ACUTE INFECTIOUS FEVERS, ESPECIALLY SCARLET FEVER.

The first question raised was, *Whether scarlet fever is contagious during the stage of incubation*, before the period of invasion, and if so, to what extent?

Dr. Beverly Robinson said that his impression was that he had seen cases in which the contagion had evidently been carried during the incubative period. He thought such cases very difficult to prove and very exceptional.

Dr. Clement Cleveland had no experience to warrant him in believing that scarlet fever was contagious in the period of incubation, but he had the impression that it was contagious during that time.

Dr. Kinnicutt related two cases, which he thought might be of interest as showing the slight power of the contagion during this stage, but which furnished only negative evidence.

Dr. James B. Hunter related the history of a case furnishing similar negative evidence.

The President, Dr. A. B. Ball, thought such negative evidence not very valuable, because it is well known that scarlet fever is not communicated with the same ease as small-pox or measles. He remembered an instance, years ago, where two children passed the night together. One of them broke out with scarlet fever two days afterward, and the second four or five days later. It is to be remembered, however, that the contagium of scarlet fever has a remarkable tenacity for articles of clothing. There was no doubt that the disease is much more contagious in later stages.

The second question presented was, *What measures are deemed necessary during the sickness of the scarlet fever patient to prevent the spread of the disease?*

Dr. Robinson said that he adopted the usual means of isolation. He had the meals and medicine served by one person who would not come in direct contact with other members of the household. He used disinfectants, usually the chlorides, but in rather a perfunctory and routine way, and he did not feel now that they did much good. The main thing was to secure good ventilation, which is the best disinfectant. He put the disinfectant over the bed-clothes, in the fœcal and other discharges, and placed it about the room.

Dr. Cleveland tried to make isolation as complete as possible. He believed in the great importance of ventilation. He usually had a spray of carbolic acid ʒ j. to Oj., or of a bichloride solution frequently used in the room. All the clothing taken from the patient was disinfected at once. As soon as the eruption was out, he had the skin anointed with carbolized vaseline, gr. v. to ℥ ij. The skin was bathed every day, and after this re-anointed.

Dr. S. Baruch said that his practice was isolation and plenty of air. He had given up disinfectants in the room entirely. He believed that they did no good, and did harm by encouraging a false sense of security, to the exclusion of ventilation, etc. He had all the clothing after use soaked in a chloride of zinc solution, until it was ready to be washed separately.

Dr. George L. Peabody followed very much the same practice as Dr. Baruch. When so requested, he sometimes suspended sheets in the room wet with a disinfectant solution. In one recent case he had had the stools disinfected, although he was not clearly of the opinion that the contagion was carried in them.

Dr. E. G. Janeway advised disinfecting the excreta, because infectious material from the skin and elsewhere was apt to get mixed with them. Another point was, if possible, not to have the clothing taken through the house. He had them thrown out of the window into the yard below, after having them thoroughly boiled or soaked in a disinfectant solution, *e. g.*, chloride of zinc made up by the Board of Health rules. Beyond this, he went no further in the use of disinfectants, except that he took great care about the patient, that all articles which had come in contact with the skin or had been used by the patient be burnt up or disinfected; trusting also to thorough disinfection after the patient got well. He did not know that the carbolic acid did much good, but vaseline is useful if rubbed into the skin. He thought it a good plan, when there were other families on the same floor, to hang a sheet dampened with a disinfectant over the door. He preferred burning the rags, and as far as possible the clothing used about the patient to taking the risk of inefficient disinfection.

Dr. Kinnicutt believed in isolation, ventilation, and thorough disinfection. He recommended that the clothes, unless thoroughly disinfected, be thrown out of the window instead of carried through the house.

Dr. Hunter attached much importance to sanitary portières, or sheets hung over the door and kept wet with carbolic acid solutions. He had the clothing disinfected and put in a separate wash.

The President thought that there was good reason for believing that the infectious poison was a blood poison, and that it passed off in all the excreta. Therefore, their disinfection was a rational one.

The third question proposed was, *How long the scarlet fever patient should be isolated.* Dr. Robinson said that his rule had been the usual one of isolating for six weeks. This furnished a good working basis. He had known of cases which had been isolated for a longer time and yet had carried the disease. He felt, therefore, that there was no definite period which could be absolutely fixed as safe.

Dr. Cleveland never felt willing to take the responsibility of removing the isolation and giving a positive assurance that there was no further danger. He followed about the same practice as Dr. Robinson as to limit of time.

Dr. Baruch said that the principal trouble was in preventing the too early use of the infected room. The room, not the child, was the source of danger.

Dr. Janeway doubted if the whole of the desquamative period was contagious. Carpenter claims that scarlatina is not contagious after the tenth day. Some years ago he had a case which made him take a different view to that which he had held formerly. A woman living in a tenement house was taken with scarlet fever. The rest of the family, including children, were sent away for three weeks. While the woman was still desquamating freely the family insisted on returning. The rooms were thoroughly disinfected, and the woman given two baths. The family then returned and none caught the fever. He thought that the danger in the desquamating stage was more about the room or clothes which had not been thoroughly disinfected. He waited until desquamation was complete, and then had the head shampooed twice.

Dr. Kinnicutt said that careful thermometric observations showed that a slight elevation of temperature persisted into the third and fourth weeks in a large number of uncomplicated cases. This would seem to indicate that the morbific action was not exhausted, although the more palpable symptoms of the disease had disappeared. Certainly as long as this elevation of temperature exists, we must expect that there is danger of contagion from the person. Referring to the opinion that intercourse should not be permitted until a week after desquamation had ceased, the speaker said that cases had been reported in which desquamation had lasted until the seventy-seventh day. In such cases, Dr. A. Jacobi had expressed the opinion that the *prolonged* desquamation was free from danger, as it might be regarded as a simple dermatitis. Dr. Carrol, of the State Board of Health, had recently expressed a similar view in an interesting paper, a view in which the speaker fully concurred. Dr. Kinnicutt regarded forty days as the full limit of time in which *contagion from the person* was probable.

Dr. Hunter reported a case where scarlet fever had been conveyed by a box of toys, sent down to Long Branch, from a sick patient in New York. His rule as to duration of quarantine was six weeks.

The President said that this period had recently been adopted in England by a convention assembled for the purpose of discussing these questions.

Dr. Janeway said that he did not feel afraid of contagion from the person after the first month. In practice, however, he would probably advise a longer quarantine.

The fourth question was, *Whether the physician who is attending a case of scarlet fever ought to take midwifery cases.* Dr. Robinson thought that, as a matter of prudence, the physician ought not to attend midwifery cases and scarlet fever at the same time. Still, he did not think that there was a great deal of danger of either the mother or child taking the fever.

Dr. Cleveland said it was his rule not to attend scarlatina and obstetrical cases at the same time.

Dr. Baruch did not believe that the scarlet fever poison could cause puerperal fever, and did not think that physicians could convey puerperal fever from scarlet fever cases. He thought that, practically, it would very much limit the work of the general physician, if he had to give up obstetrical cases whenever he had a case of scarlet fever. He did not think that scarlet fever could be conveyed by a third healthy person, and quoted Henoch's statement in support of such a view.

Dr. Hunter thought it not advisable to attend scarlet fever and obstetrical cases at the same time. He would not perform a serious surgical operation, such as ovariotomy, while attending a scarlet fever patient. He looked upon a puerperal woman as very much in the same state as a person upon whom a surgical operation had been performed.

Dr. C. L. Dana related an instance in which a physician had brought the scarlet fever into his own household, as illustrating the positive fact that physicians may be carriers of the infection. He thought it important to know to what extent they could carry the poison, and what practical means might be adopted to lessen the danger.

Dr. Cleveland said it was his practice always to make calls on such patients last, and then to change his clothes.

The President had never seen any bad results from physicians taking confinement cases while attending scarlet fever, and he thought the danger greatly exaggerated. A great deal of what is called scarlet fever in puerperal women he believed was not scarlet fever at all.

The fifth question was, *As to whether defective sewerage has anything to do with scarlet fever.* Dr. Janeway did not believe that there was any proof at all that defective sewerage has anything to do with scarlet fever. One sees the most defective sewerage arrangements and no scarlet fever, while on the other hand one finds scarlet fever where the sewerage is perfect. The same was true with regard to slaughter-houses. Philadelphia and Boston had their slaughter-houses moved away, but without affecting the amount of scarlet fever.—*New York Medical Record.*

NEW YORK COUNTY MEDICAL ASSOCIATION. Stated meeting, March 16, 1885.

Dr. John Shrady read a paper on

### THE ETIOLOGY OF STILL-BIRTHS.*

In the discussion which followed, which was participated in by Drs. Manley, W. T. White, Hartmann, Oberndorfer, Buchanan, McGregor, McLeod and

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* See p. 362.

C. S. Wood, the relations of malaria to still-birth and the danger of giving quinine to pregnant women formed the chief topic of interest. While two or three gentlemen advised that when quinine was indicated under the circumstances it should be given in quite small doses, though repeated as often as required, the prevalent opinion seemed to be that the drug could be given with as much impunity to the pregnant as to any other class of individuals. (The report of the remainder of the proceedings is taken from the Philadelphia *Medical News*.)

Dr. Janeway said that he thought it would be well to call attention to the fact that a large number of still-births in this city resulted from a cause which had not as yet been alluded to, viz., the use of ergot by incompetent midwives. When connected with the Board of Health, he had made quite a careful investigation of this matter, and he had found that the use of ergot constituted a pretty large factor in the etiology of still-births in all cases attended by midwives. Another prominent factor was the fact that in difficult cases of labor the midwives usually waited too long before sending for medical assistance. These matters he considered important, in view of the fact that about one-third of all the cases of confinement in New York were attended by midwives.

The President, Dr. C. A. Leale, called attention to chronic obesity as a cause of still-births. Although the pelvic diameters might be ample, there might be such obstruction offered by the soft parts of the mother that the child could not be born alive. Several such instances had come under his observation, and in one case he had successfully delivered the patient of a living child by resorting to the induction of premature labor.

### EXHIBITION OF A NEW AND SIMPLE APPARATUS FOR DETERMINING THE QUANTITY OF UREA IN THE URINE.

Dr. Charles A. Doremus, Professor Adjunct to the Chair of Chemistry and Toxicology in Bellevue Hospital Medical College, presented a new ureometer which he had devised. It is a glass instrument consisting of a tube bent into two arms, a longer and a shorter one, at an angle of forty-five degrees to each other. The extremity of the longer arm, on which a graduated scale is marked, is closed, while that of the shorter one, which is provided with a bulb, is left open. The long arm is filled, by inclining it, with a hypobromite solution prepared according to the formula of Knap, by dissolving 100 grammes of sodium hydrate in 250 cubic centimetres of water. By means of a nipple pipette a measured volume of the urine (1 cubic centimetre) is injected slowly up the long arm by compressing the nipple. A rapid decomposition of the urea takes place, the bubbles of nitrogen rising in the long arm, while the displaced liquid flows into the bulb, which serves as a reservoir. With care the urine may be delivered at a rate that permits the decomposition to take place without loss of gas, and the graduation on the glass indicates the weight of urea in the urine used. Two forms of the apparatus were made, Dr. Doremus said : one graduated to read fractions of a gramme, the other to show grains of urea in the fluid ounce of urine. The instruments were supplied by Messrs. Eimer and Amend, of Third avenue and Eighteenth street, New York.

Dr. A. Flint, jr., said that it was a thing to rejoice at whenever any addition was made to the simple methods in our possession of obtaining important results, and he thought that no more important matter could be brought to the attention of the busy practitioner than such a one for determining the quantity of urea, as Prof. Doremus had just presented to the association. The practitioner wanted to know how much urea there was in the urine of his patient, so that he could judge whether the kidneys were doing their work properly in throwing off a sufficient quantity of excrementitious products. He had long felt the want of some easy way of determining this, and the apparatus which had just been exhibited seemed to him to meet the case precisely. He, therefore, regarded it as one of the most important contributions which had been presented to the profession on the subject.

Dr. E. G. Janeway then presented two specimens, which he said he thought would be of interest. The first one, which illustrated a point in doubt, was a case of

### PERFORATING ULCER OF THE ŒSOPHAGUS.

It occurred in a child who, at the age of one year, was attacked with infantile paralysis, and who afterwards died of dysentery. The ulcer, which was round, and half an inch in diameter, was situated about one inch above the entrance of the œsophagus into the stomach, and not in the posterior wall, but the left lateral wall. The point of interest in connection with the case was the fact that the existence of such a peptic ulcer of the œsophagus before death had been denied; and in his recent work on diseases of the throat and nose, including those of the œsophagus, Morell Mackenzie stated that a case of his own, which he had reported some time ago as "simple ulcer of the œsophagus," as well as one of Dr. Benson, was too incomplete to be relied on. Mackenzie thought they were open to the objection that the disease may have been of malignant nature, the ulcerated surface not having been submitted to the test of microscopic examination. This, however, he believed was a case of true peptic ulcer, such as was met with in the stomach, and due to the action of the gastric juice upon the mucous membrane. It was a difficult thing to prove just what changes occurred before death, and which were post mortem in a case of this kind; but the ulcer here in the œsophagus presented precisely the same appearances as those found in the stomach, which were acknowledged by all to give rise to perforation, peritonitis, and death. In the present instance there was inflammation not only of the connective tissue surrounding the œsophagus, but also of the pericardium and left pleura. Again, the odor of the parts was entirely different from the sour odor characteristic of post mortem gastric digestion. During life, however, so far as could be ascertained, the child presented no signs of pericarditis, pleurisy, or perforating ulcer of the œsophagus.

### SUDDEN DEATH IN A CASE OF TRACHEAL STENOSIS.

The other specimen, Dr. Janeway said, was from a case illustrating a rare method of sudden death. It was that of a child who had a mass of enlarged glands on the right side of the trachea, giving rise to tracheal stenosis, and died very suddenly from asphyxia. At the autopsy a cheesy gland was found at the bifurcation of the trachea, which had produced ulceration, while occluding the stenosed passage was a white mass which had undoubtedly become detached from this, but which was at first mistaken for coagulated milk. In addition, there was a fibroid induration of the upper lobe of the right lung, and a thickening around the bronchi. In connection with this case, Dr. Janeway remarked that this bronchial and tracheal stenosis was no uncommon thing, and that we should therefore be on the watch for it. Two physicians had expressed the opinion that this child had died of paralysis of the heart; but paralysis of the heart, like the term malaria, was often used merely as a convenient expression to conceal ignorance. What was believed to be paralysis could only be determined by an autopsy. When stridor was heard in connection with tracheal breathing, it should always attract attention to the glands of the part. It was a fact, Dr. Janeway said in conclusion, that in childhood we could have the whole course of tubercolosis gone through with without any elevation of temperature whatever.

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## SANITARY DEPARTMENT.

Illinois State Board of Health.—In his recent biennial message to the Illinois Legislature Governor Hamilton says: The State Board of Health, which was in its inception very difficult to establish by legislative enactment, has steadily grown in usefulness and popular favor, until now it is one of the most important bureaus of the State government. By reason of the able management of its members, and especially of its secretary, the medical profession of the State has been very much elevated and improved. Incompetent beginners have been prevented from practicing. The grade of medical education required for practice has been raised to a respectable and safe standard, while mountebanks and quacks have been driven from the practice of their wiles and deceptions on the people of this State. The health of the citizens and their protection from inroads of contagious and epidemic diseases have been faithfully and carefully watched. Rules for sanitary care and regulation and instruction as to prevention and cure of prevalent, and especially dangerous diseases, have also been so successfully published and promulgated that it is believed thousands of lives have been saved.

The annual report of the Secretary shows that at the close of the December quarter there remained the same gratifying condition of the public health as noted from time to time during the year. The graver contagious diseases—small pox, diphtheria, scarlet fever and typhoid—have not prevailed to an epidemic extent in any locality. Localized outbreaks of small-pox, due in all cases to contagion imported from neighboring States and confined to those who had neglected vaccinal protection, have occurred in Alexander, Clark, Coles, Crawford, Jefferson, Kendall, Marion, Perry Pulaski, Randolph, St. Clair, Sangamon and Washington counties. At Yorkville in Kendall county, Coulterville in Randolph county, and at East St. Louis, the conditions were such as to necessitate the personal attention of the Secretary. From professional incompetency and municipal neglect the outbreak of Centralia resulted in 32 cases and 6 deaths, and the contagion was thence carried into Washington, Jefferson and Sangamon counties. At the close of the year the State was entirely free from the disease so far as reported, and there had been only four mild cases in two localities—one at Palestine in Crawford county, and three at Darwin, Clark county—during the preceding three months. Several cases were brought into Chicago during the year, but in only one instance did a resident of the city contract the disease from any of these imported cases.

In regard to the sanitary condition of State institutions, the Secretary says: In connection with my inspection of State institutions with reference to the advent of cholera, among other matter the sewerage of the Joliet Penitentiary has received attention. The sewage and wastes of some 2,000 persons and the drainage of the enclosure are carried from the buildings and through the penitentiary grounds in a two-foot sewer; but a short distance beyond the contents empty into an open ditch, about half a mile long, and through which the sewage is conveyed into the upper basin. Aside from the sewer gas, which is forced into the penitentiary buildings by winds from the southwest, the open ditch and the additional pollution of the upper basin are sanitary nuisances which should be abated as speedily as practicable.

Since the inspection was made some relief has been obtained by the use of disinfectants, which have been liberally applied at my suggestion; but this method of treatment is inadequate and temporary. The obvious remedy and the only one which will meet the sanitary requirements, is the construction of a continuous sewer from the penitentiary termination to some suitable point of discharge on the river.

As also connected with the sanitary condition of State institutions disclosed during my inspection, the need of a hospital building at the Asylum for Feeble-minded Children at Lincoln was noted. Such a structure, entirely separate from the main building and so arranged as to be used for an isolation hospital for contagious diseases when necessary, is imperatively demanded by the present crowded condition of the institution and from past experience. An epidemic of scarlet fever less than two years ago resulted in fifty cases and six deaths among the children, besides extending to several attendants, when there is every reason to believe the disease might have been greatly limited had there been the necessary facilities for the proper care of those first attacked. A cheap frame structure, detached from the main building, and suitably equipped, should be provided as soon as practicable.

Proper Care of Waste Pipes.—George E. Waring, Jr., thus concludes an article on "Pure Air in the House" in *Babyhood:* The drainage-works of the house being properly constructed, much depends on their proper use and on their proper care. It is not a proper use of a water-closet to discharge into it broken crockery, brushes, cloths, and other bulky articles, as servants, heedlessly or by design, are apt to do. It is not a proper use of a wash-basin, but unhappily it is not an uncommon use, to empty and wash chamber-vessels in it. Neither is the same use an appropriate one for the bath-tub. The following points are of especial importance: No trap should be allowed to retain the same water more than a single day; at some fixed time during the day all fixtures which are not in regular use should be visited and have enough water sent through them to make sure of a renewal of the trapping water. Every water-closet should daily be thoroughly flushed and thoroughly washed inside and out, and the floor and the whole space under the seat should be washed clean and made thoroughly dry. If water can be afforded therefor, the bath-tub when filled should be filled to overflowing, clean water being allowed to run through its hidden overflow for a sufficient time to wash it clean. Kitchen and pantry sinks should be watched as to the freedom with which they discharge their wastes, a slow flow being an indication either of a stoppage at the strainer, which is not serious and which can easily be removed, or of an accumulation of congealed grease sufficient to reduce the water-way materially. Such grease, so situated, is always undergoing decomposition, and we cannot always be sure that the trap affords an efficient protection against its gases. The servants' water-closet should be an object of special attention. If there is but one first-rate closet in the house this should be the one, and it should be so set and so exposed to cleansing and inspection, that not only it will be an easy matter to see that it is kept in good order, but that its cleanly and attractive condition shall be an incentive to those who use it to keep it in good order. The principle underlying these recommendations is this : The introduction of modern plumbing appliances into the house for the removal of its organic wastes is a recent highly artificial addition to our conditions of life, which has afforded such luxury and convenience that little heed is generally given to the possible mischief that may be entailed. Much less consideration has been given to the means by which the difficulties presented may be overcome. The luxury and convenience are undeniable. The advantage on the score of health, where proper care is given, is also undeniable ; but it is equally true that unless the possible dangers to be apprehended are duly appreciated, and unless an intelligent and anxious care is given by householders themselves to the construction, and almost more especially to the use and care of the fixtures, the liability to injury is great.

THE ALBANY BASIN NUISANCE.—In regard to the condition of the Albany basin, the New York State Board of Health has expressed the following conclusion : In view of the facts stated, we conclude that the Albany basin in its present condition is a nuisance, endangering the health of the citizens of Albany and of all persons brought within its influence by the effluvia emitted from the sewage deposits at low tide and by probable contamination of the water supply of the City of Albany ; that in view of the fact that the Albany basin is a part of the Erie canal, and, therefore, the property of the State, it is the duty of the State either to clean out the basin or to fill it up, abating the nuisance by whichever way may be best for the interests of commerce and navigation, to serve which the basin was constructed ; that, as the principal cause of the Albany basin being a nuisance is the pouring into it of the sewage of the City of Albany, the use of the basin as a receptacle of the sewage of the City of Albany should be forbidden by law, giving reasonable time for the city to construct an intercepting sewer which should deliver the sewage below the city ; that the water supply of the City of Albany is now probably contaminated by the polluted waters of the Albany basin ; and that while the cleaning of the basin and the building of an intercepting sewer will very much lessen the danger from polluted drinking water, yet the fact that such a large population deliver their sewage into the river within six miles above Albany renders it desirable that a supply of water less liable to contamination should, if possible, be found for the city.

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PERMANENT SOLUTION OF IRON ACETATE.—Grassinger states (*Pharm. Central.*) a permanent solution of iron acetate is produced from a perfectly pure iron hydrate dissolved in hot acetic acid. The hydrated iron oxide obtained by precipitation from a cold solution of iron chloride with ammonia is washed with boiling-hot distilled water until the washings do not show the slightest trace of chlorine. The moist precipitate is dissolved in acetic acid on a water-bath, a perfectly clear blood-red liquid being the result, which does not undergo any change by boiling. The presence or addition, however, of the smallest quantity of any salt, especially an alkali acetate, will produce, upon being heated, the characteristic gelatinous precipitate, throwing the whole of the iron out of solution upon the boiling of the liquid.

# BIOGRAPHY.

THE LATE EDITOR OF THE "JOURNAL."—From a large number of tributes to the memory of Dr. Gaillard, published in the medical press throughout the country and Canada, we select the following passages from three of the notices to present to our readers:

"The medical profession has sustained another and most grievous loss, and medical journalism in America has been robbed of one of its brightest ornaments in the death of Professor E. S. Gaillard, the veteran editor. The announcement will be a shock to the whole medical world, yet it will carry a pang of poignant grief to the hearts of his thousands of readers, all of whom had learned to love, admire and respect him for his many excellent qualities of head and heart, and for his wonderful versatility of talent, which, exercised in the field of medical literature, was at times dazzling. In any and all departments of medical journalism he was equally facile, whether in editorial, in the discussions of the gravest problems in medical and sanitary science, or in the review department as a judge and critic of medical literature, or as a commentator on current events—whatever his subject, his pen seemed to flash far and leave its mark indelibly impressed upon the mind of the reader. . . . . . He was, no doubt, the most brilliant and dashing, if not the ablest, journalist that America could boast amid all the talent to be found in the medical press of the country—the Hotspur of medical journalism."—*Texas Courier-Record of Medicine.*

"No man in the profession, perhaps, was more untiringly active than Dr. Gaillard, notwithstanding the suffering he so frequently and, indeed, almost continuously endured until his death, because of neuralgia arising in the stump of his amputated arm. As a journalist, he won more than a national reputation."—*Virginia Medical Monthly.*

"Since the close of the civil war Dr. Gaillard's efforts have been mainly in the field of medical literature. These have been too recent and their results too well known to require extended notice. The publication of the journal which bears his name has monopolized much of his time and thoughts. Since he began its publication in New York a few years ago, it has attained a circulation, popularity and influence almost phenomenal. The old friends and confrères of the editor were extremely gratified at the success of GAILLARD'S MEDICAL JOURNAL, and indulged the hope that it would become a permanent source of honorable competency for his declining years."—*Atlanta Medical and Surgical Journal.*

At a meeting of the New York County Medical Association, held March 16th, 1885, the following resolution, introduced by Prof. Flint, was unanimously adopted:

*Resolved,* That in the death of our late associate, Dr. E. S. Gaillard, the profession has lost a bright ornament, medical journalism an able exponent, and a prominent object of our association, "the maintenance of the honor and character of the medical profession," an earnest advocate and defender.

**Thomas N. Reynolds, M.D.**—Dr. Thomas N. Reynolds, of Detroit, Michigan, one of the leading physicians of that city, died in San Antonia, Texas, on Saturday, March 14. He was born in Picton, Ontario, February 2, 1843. He received his literary education in Medford, Owen Sound and Toronto, Ontario, and in 1870 graduated from the Toronto School of Medicine, and the College of Physicians and Surgeons of Ontario, with honors. He then commenced practice at Orion, Michigan, where he soon became known as one of the leading physicians of that portion of the State. In 1875 he retired from practice and went to Europe, where he made an extensive tour through England, Ireland and Scotland, Austria, Prussia, Italy, France and Spain, devoting special attention to medical pursuits in the leading hospitals of London, Edinburgh, Berlin, Vienna and Paris. In 1877 he returned and settled in Detroit, where he soon became very actively engaged in practice. In 1883, from overwork and exposure, he contracted bronchitis, from which he never recovered, and in the spring of 1884 he gave up practice; since which time he had traveled most of the time for his health. His life, though his health was much impaired by the lung trouble, was finally brought to a close by a severe hæmorrhage from the lungs. He was Professor of Materia Medica and Therapeutics and of Clinical Medicine in the Detroit Medical College, physician to St. Mary's Hospital, member of the Northeastern District Medical Association, member of the Detroit Medical and Library Association, of the Michigan State Medical Society, and of the American Medical Association.—*Western Medical Reporter.*

**William Gillbee, M.R.C.S.**—Mr. William Gillbee, one of the oldest practitioners in Melbourne, expired on January 4th, aged sixty years. The deceased was born in Hackney, and received his medical education at Edinburgh. In 1848 he became a member of the Royal College of Surgeons of England, and in the following year visited Tasmania and Victoria. Proceeding to California he for two years lived an adventurous life in the wild gold-fields of that country. Returning to England, he again took ship for Geelong, and at once commenced practice in Melbourne. In the early part of 1854 he was elected surgeon to the Melbourne Hospital, then about one-tenth of its present size. With this institution his professional life was closely identified, and in every movement made to enlarge and improve it he took a very active share. He held the position of honorary surgeon to the institution for twenty-two years, till the election of 1875, when he was not one of the successful candidates. He, however, retained his place in the committee of the hospital, and in 1877 became its vice-president, and in 1882 its president. In 1853 he assisted in the formation of the Medical Society of Victoria, of which, ten years later, he became president. In 1879 he warmly assisted in the formation of the Victorian branch of the British Medical Association, and was elected its first president. In 1872 he was elected by a vote of the whole profession to a seat on the Medical Board of Victoria, and about six years ago he was appointed its president, which office he held at the time of his death. The cause of his death was disease of the lungs, which a visit to England in 1883 had entirely failed to benefit.—*Lancet.*

# REVIEWS.

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TRANSACTIONS OF THE NEW YORK STATE MEDICAL ASSOCIATION FOR THE YEAR 1884. Vol. I. Edited for the Association by AUSTIN FLINT, Jr., M.D., of New York County. New York: D. Appleton & Company. 1885. Pp. 656.

This sumptuous volume, which the Appletons have done their best to make pleasing to the eye, probably constitutes, on account of the value and variety of its scientific communications, the most important, as it no doubt does the most carefully and exhaustively edited, body of transactions that has yet appeared in this country. For the immense labor and the time-consuming attention to every point of minutest detail which he has given with indefatigable zeal to the work, Dr. Flint deserves the special gratitude of every Fellow of the Association, to say nothing of the members of the profession at large. The book can well be pointed to as something to be regarded with pride and satisfaction.

The extraordinary success which crowned the first year of its existence, and the admirable system of organization adopted by the new society, have already been sufficiently alluded to in the pages of this Journal. During the year there were enrolled no less than 522 Fellows, of whom 8 have died, leaving the actual membership at 514. The present volume contains some fifty papers, of which all but ten were read at the annual meeting in November last; which of itself is a sufficient indication of the manner in which the Association devoted itself to scientific work. Of course, in so large a number of contributions from physicians and surgeons coming from such an extensive territorial area as that comprised within the limits of the great State of New York, and of such varied attainments and culture, there is almost every degree of merit; but it can be affirmed without fear of gainsaying that the general average of the articles is one of unusual excellence. The high standard which was aimed at by those having the interests of the Association most at heart has, on the whole, been maintained to a very gratifying degree.

In the limits of such a review as this it is manifestly impossible to dwell critically upon the merits of each individual paper; but it may perhaps be of interest to glance briefly at a number, and thus obtain some idea of the scope and variety displayed by them. The address by the President, while not of striking originality, is pleasing in style, and contains much good common sense. In it occurs one sentence which will probably be heard repeated in similar addresses for many years to come. Having quoted the aphorism of Broussais, "The real physician is the one who cures," he goes on to say: "And, paraphrasing Sacred Writ, it may be added, And now abideth pathology, diagnosis, therapeutics, these three; but the greatest of these is therapeutics." In advocating a three years' graded course of training, with preliminary examinations, at the medical colleges, he says: "And yet the difference between the old system and the new is largely one of arrangements. A change from one to the other can be effected with as little commotion as was noticed when twenty discordant and puzzling computations were consolidated into the present admirable system of standard time. No more teachers would be required, and no better lectures could be delivered or would be needed. The labors of the professors would be considerably increased, it is true, because the total length of the lecture season would be more than doubled; but they would hardly be conscious that a radical change, amounting to a revolution, had taken place."

In the address on Surgery, Dr. E. M. Moore gives a *résumé* of the history of transfusion and describes the construction and application of a simple apparatus of his own devising. It consists of a canula of peculiar construction, provided with Moncocq's mandril. This, after being placed in the vein of the recipient, he says, can be allowed to remain a long time without danger of the formation of coagula, because its rounded end prevents the retention of any portion of blood separated from the general circulation. This canula is fitted into the lower extremity of an elongated rubber sac, into which the blood is allowed to flow directly from the vein of the donor, the time of the operation being accurately watched by an assistant, who announces the expiration of each ten seconds. At the end of fifty or sixty seconds the mandril must be thrust forward, thus cutting off further flow from the sac. In so short a time as this, Dr. Moore continues, there should not be carried in more than two or three ounces, and in most cases this quantity is sufficient. If, however, in consequence of extraordinary and sudden loss of blood, more should be required, the removal of the sac and its careful cleansing, and clearing the lateral canula, render the apparatus fit for use without the removal of the canula from the vein.

In his admirable paper on "A New Apparatus for Transfusion, with Remarks on the Intra-Vascular Injection of Blood and Other Fluids," Dr. Joseph C. Hutchinson describes an apparatus, consisting of a cylindrical glass receiver graduated in cubic inches, having a metal cap containing a perforated female screw attached to its lower end, with a perforated nipple-shaped termination, to which a rubber tube, four feet long, is connected, in order to convey the liquid from the receiver to the canula which enters the blood-vessel. The receiver, the mouth of which is closed by a rubber stopper, perforated to admit a thermometer, is surrounded by a double jacket of India-rubber for holding hot water, which has a narrow opening extending two-thirds of its length, to allow the operator to see the graduated marks on the receiver. For this apparatus he recommends a solution of the chlorides of sodium and potassium and the phosphate, sulphate and carbonate of sodium, deduced from Schmidt's analysis. The fluid should enter the vein at a rate not exceeding one ounce per minute, and the quantity of fluid to be injected is from twelve to twenty-four ounces. Among Dr. Hutchinson's conclusions are the following: That the danger of excessive loss of blood is not due to the diminution of its corpuscles and other solid constituents; that the important element in transfusion is the restoration of fluid to the vascular system, increasing vascular tension and causing energetic contractions of the heart, and that the intra-venous injection of saline solutions in appropriate cases is a more simple and safer operation than transfusion of blood.

The paper of Dr. Carroll, Secretary of the State Board of Health, on the duration of contagiousness after acute infectious diseases, is a suggestive and useful one, offering, as it does, a field in which there is ample opportunity for collective inquiry, and in which there is at present much need of light. There is a good deal of food for reflection in Dr. E. R. Squibb's paper on "Modern Progress in Materia Medica and Therapeutics." In taking a retrospect of the last quarter of a century, he is impressed with a number of points, among which are the following: The thoughtful physician seems more and more to realize the fact that his success as an individual, as well as the success of his profession, depends upon his real utility to the public; that the old idea of specific or particular diseases and specific cures seems to have undergone considerable modification for the better, not only among the intelligent portion of the people, but in the medical profession, many physicians successfully treating disease, if not diseases, but very few undertaking cures; that there is a gradual and steady emancipation from the trammels of arbitrary doses of medicines; that there has been important progress made in the knowledge obtained and applied in scrutinizing the quality of medicines, which has resulted in the production of a better class of medicinal agents than was ever before attained, that physicians use fewer and more active agents, and use them more simply; and, finally, that a great advance has been made in the power and definiteness of the agents used and in judging of the manner and the effect of using them. In conclusion, he says very truly, however, that it should not be inferred that all the prominent changes in relation to the materia medica within the past few years have been improvements, or have been for the good of either the profession or the public; for much doubtful medication has grown into common use with large numbers of physicians who do not seem to stop to think where the mercantile enterprise of the manufacturer is carrying them.

Undoubtedly, one of the papers of greatest permanent value is that by Dr. Frederick Hyde, entitled, "Notes on Dislocation of the Hip, based upon 273 cases occurring in New York State." It is accompanied by elaborate tables, and by a number of conclusions of great practical utility. The statistics indicate, Dr. Hyde thinks, that there is some room for improvement among our surgical practitioners in regard to their knowledge of this injury. The ability to reduce a dislocated hip of weeks' or months' standing is creditable to the surgeon, he says; but how far this ability will atone for failure to detect the nature of the case when recent, and to restore the head of the bone at once to its socket, while the latter is able to receive and retain it, is a question which must be left for individual decision. Dr. Avery Segur contributes a brief, but excellent paper on intestinal obstruction, in which he states the indications in cases where the obstruction cannot be removed by surgical interference, as follows: (*a*) To allay pain and intestinal spasm, and to subdue all irregular intestinal muscular action. (*b*) To give rest to the stomach. (*c*) To sustain nutrition, and to maintain the functions of the kidneys, liver, skin, respiration, etc. (*d*) To prevent and limit inflammation. (*e*) Finally, but first in importance, to overcome the obstruction. Like Dr. Hunter McGuire, in his paper on the same subject before the Virginia State Medical Society, alluded to elsewhere, he condemns the use of laxatives or purgatives *in toto*. The plan of treatment recommended is the combined use of morphia and atropia hypodermically, constant enemata of flaxseed tea, nutrient enemata at less frequent intervals, flaxseed poultices to the abdomen, the maintenance of the horizontal position, and the avoidance of irregular action on the part of the stomach by forcing nothing upon it. This plan is to be steadily pursued day after day, until pain is relieved, inflammation, if it have supervened, has terminated, and the bowels act spontaneously; and, in the conclusion of the paper, the writer defends it on what would seem to be incontrovertible physiological grounds.

Two short papers on peculiar forms of metallic poisoning are well worth the careful notice of the reader. The first is one by Dr. R. H. Sabin, on a case of acute lead poisoning resulting fatally. It is that of a lad, sixteen years of age, who was suddenly taken with a fainting turn at a dance; on partially recovering from which he writhed and twisted as if in severe pain. He soon became insensible, however, and remained in this condition until his death, thirty-two hours after the first attack. It is believed that there was a rapid effusion on the brain, though no autopsy could be obtained. There was the characteristic blue mark along the edge of the gums, indicating lead poisoning. The patient had been at work for some time in a paint shop, rubbing paint on cars, and on the day that he was attacked he had been painting a house for his father. Two other cases of lead poisoning occurred among the workmen from the same establishment, both of whom recovered. The other paper, by Dr. Charles Buckley, on chronic mercurial poisoning, calls attention to the fact that the wearing of red rubber teeth plates, in which a preparation of mercury is used for the coloring, is liable to give rise to severe gastric, intestinal and nervous disturbance. Dr. J. J. A. Burke reports an interesting case of pyæmia and death after the operation for convergent squint.

Dr. H. E. Mitchell has a timely paper on errors of refraction and the importance of their recognition in early life. In order that general practitioners, who have paid no special attention to ophthalmology, may be able to recognize these defects, he suggests that they should provide themselves with an ordinary set of test-types and lines and with an optometer. The latter part of the paper is devoted to an explanation of this instrument, which he considers of great value, but which is not mentioned in any work on ophthalmology or the catalogue of any instrument maker.

Both the papers of Dr. Flint, the one on the dietetic treatment of dyspepsia and the other, constituting the address in medicine, on medicinal and non-medicinal therapeutics, are highly characteristic and eminently worthy of the reputation of their distinguished author. Both have attracted unusual attention and been frequently republished as well as freely quoted and commented upon, on both sides of the Atlantic. To refer to but two instances of this, in his Lettsonian lectures, on Disorders of Digestion, recently delivered before the Medical Society of London, Dr. T. Lauder Brunton quotes approvingly from the first essay, and the *British Medical Journal* of January 17, 1885, devotes a column to editorial comments on the same, commencing its remarks by saying, " Dr. Austin Flint is arousing the prophets of common sense in relation to the management of the stomach, and the endeavor to overcome its difficulties."

In a paper on double synchronous amputations, Dr. U. C. Lynde has made the attempt to furnish a report of all the grave operations of this character, by whomsoever made, in the State of New York; and by the examination of hospital records, as well as by addressing inquiries to surgeons and general practitioners throughout the State, he has secured statistics of 92 cases, which are arranged in tables. No less than nineteen-twentieths of all the amputations are in consequence of railway injuries. This paper, the preparation of which must have involved a vast amount of time and trouble, will, like that of Dr. Hyde, on dislocation of the hip, constitute a valuable addition to the surgical literature of the State. In a second paper on the functions of the auricles, Dr. Lynde endeavors to show that the auricles are entirely passive; being but the expanded terminations of the veins, and serving, first, as the confluence of great veins, second, as diverticula to the blood from these veins during the contraction of the ventricles, and third, as reservoirs for the ready supply of blood to the ventricles. The greater part of the article is taken up with an argument to prove that they do not contract, a proposition of the truth of which it will take stronger evidence than the writer here educes to convince physiologists.

Though all may not deem it necessary to be as careful in employing the aspirator as Dr. Ferguson suggests in his thoughtful paper on the use of the aspirator in hydrothorax, the fact that in three cases of this affection under his observation aspiration was, as far as could be judged, the means of producing pyothorax, certainly seems to indicate that a considerable amount of caution ought to be observed in the use of the instrument. Undoubtedly it is the practice of many to resort to it somewhat recklessly, without a thought that serious consequences may possibly result. Since the occurrence of the last of the cases referred to Dr. Ferguson has not removed more than a pint of liquid at one aspiration, either to relieve dyspnœa or to induce absorption, and he states that since he has adopted this rule he does not have a larger percentage of cases resulting in notable thoracic contraction than under the more frequent and free use of the instrument. The only precaution generally enforced, he says, has been to suspend the operation "when the patient complains of a constricting pain at the epigastrium," or dyspnœa is produced; but he holds that when these symptoms result from the operation, the safety of the patient has already been jeopardized, their presence indicating a profound disturbance in the position and relation of the thoracic organs. At the close of the paper he says: "I recognize in the aspirator an instrument of much value, capable of being used with great benefit; but I also see it as an engine of harm, misery and death, when used injudiciously." Dr. T. F. Rochester describes a "New Procedure in Paracentesis Thoracis," which consists in the separation of the ribs, by the introduction of the finger through the incision in the chest-walls, in those cases in which, on account of the small space between them, it is impossible otherwise to effect the entrance of a drainage tube.

Two cases which reflect the highest possible honor on American surgery are reported by Dr. William Wotkyns Seymour. The first is related in a paper entitled, "A Successful Case of Nephro-Lithotomy for Calculus-Pyelitis." Two incisions were made, the first five inches in length, along the edge of the quadratus lumborum muscle; and the second, two inches long, in front, parallel to the crest of the ilium. Having minutely described the various steps of the operation and the subsequent history of the case, he goes on to say: "As to the merits of the operation I am more than satisfied. The question was whether extirpation (nephrectomy), or a simple incision and drainage (nephrotomy), should be the operation, and I decided upon the latter for the following reasons: First, the far greater danger of primary nephrectomy, fifty per cent. dying from the primary operation, according to Mr. Clement Lucas; second, the possibility that nephrotomy would secure the end desired; third, the fact that, in case of failure of nephrotomy, the chances of a successful nephrectomy would be markedly better. The tube was removed the tenth day after the operation. The convalescence was slow but steady, and the eighth week the patient was walking, free from pain, and in better health than for months before the operation. The other case, also successful, is one of excision of the rectum for cancer (cylindrical epithelioma). More than two months after the operation the wound is reported as well healed, with no evidence of recurrence, the only inconvenience being some incontinence of fæces, which seemed to be improving as the wound contracted. Another admirable surgical paper is that by Dr. C. C. F. Gay, on "Fracture of the Floor of the Acetabulum," which the author states he prepared for the purpose of suggesting the possibility that slight causes may produce the injury (which he believes is not so rare as has been supposed), and of warning against the danger arising from too frequent and unnecessary manipulation in order to establish the nature of the lesion. A positive diagnosis is acknowledged by all authorities to be generally extremely difficult, if not impossible, and as rest must constitute the only treatment for patients with suspected acetabular fracture, there is nothing to be gained by the handling of the parts. In a case which he reports, in which death occurred from septicæmia, Dr. Gay thinks it quite probable that the patient was deprived of her only chance of recovery by repeated examinations, two of which were entirely unnecessary, since they inflicted injury without leading any nearer to a correct diagnosis.

In an elaborate paper on Extra-Uterine Pregnancy, with an account of three cases, by Dr. Nathan Bozeman, among the conclusions arrived at are the following: That retroversion and retro-latero-versions of the uterus, and the consequent changes in the relationship of its appendages, contribute largely toward explaining the causation of extra-uterine pregnancy; that, after completing the diagnosis between the seventh and fourteenth weeks, it is of urgent importance in all cases to destroy the life of the fœtus without delay by electricity; that when rupture of the cyst occurs the abdomen should at once be opened and the bleeding vessels secured, success in all cases depending on the promptness and thoroughness of this procedure; that when abdominal pregnancy is diagnosticated at a later period, electricity should still be promptly employed; and that, when normal labor occurs with pre-existing abdominal pregnancy, it should be allowed to progress to its natural termination, the practitioner, of course, assisting the delivery with instruments when demanded, and, in the event of the dead fœtus presenting in Douglas's *cul-de-sac*, opening the cyst and emptying its contents at the same time. Dr. Frank W. Ross reports a remarkable case of rupture of the uterus, in which the entire uterine contents at full term escaped, unruptured, into the abdominal cavity. The only other case of the kind ever recorded is one by Dr. John Ramsbotham. Dr. R. B. Bontecou presents, with copy of a photograph, an extremely interesting case of conservative surgery, consisting of resection of the head of the humerus with three inches of the shaft, for comminuted gunshot fracture of the head, followed by restoration of the shaft and head with a useful arm.

Dr. Austin Flint, Jr. adds four selected typical cases of diabetes mellitus, not before reported, to the fifty which he presented at the meeting of the American Medical Association, in May last. In the first, a lady of 22, it has been found impossible to control the glycosuria entirely, and the prognosis is regarded as not altogether favorable. In the other three cases, however, in which the ages of the patients are respectively 15, 34 and 59 years, the sugar disappeared as soon as the treatment was commenced, and has never returned; the treatment consisting of anti-diabetic diet and Clemens's solution of arsenite of bromine. At the end of the paper he repeats the quotation from Cantani which he used in his former paper on the subject: "Diabetes has become to-day a disease easily and certainly curable, provided that the treatment (cure) be not begun too late." Certainly within the last few years this affection has been robbed of most of its terrors, and in the difficult problem of enabling diabetics to live comfortably and contentedly on food for the most part free from sugar or starch, no one has rendered more valuable service than Dr. Flint, who has spent an immense amount of time and trouble in arranging a satisfactory dietary for such patients.

There are a large number of other papers to which attention might well be directed on account of points of special interest; but this article has already become too long, and in closing it will only be possible to refer to a few of them by name: The address on Obstetrics and Gynæcology, by Dr. T. Gaillard Thomas; Hints on the Prevention of Insanity, by Dr. John P. Gray; Excision of the Knee-Joint instead of Amputation of the Limb in Certain Disabling Deformities due to the Position of the Knee, by Dr. Stephen Smith; The Relations between Tuberculous Joint Disease and General Tuberculosis, by Dr. Frederick S. Dennis; The Curette: Its Place and Its Power in Uterine Therapeutics, by Dr. George T. Harrison; On the Management of Breach Cases in which Both Extremities are Reflected Upward Parallel to the Body of the Child, by Dr. William T. Lusk; False Albuminuria, by Dr. Gaspar Griswold; Abscess of the Liver, by Dr. E. G. Janeway; A Case of Pistol Shot Wound Through the Stomach, by Dr. John H. Hinton, and a Case of Ligature of the Right Primitive Iliac Artery for Diffuse Aneurism of the External Iliac, with Death from Pyæmia on the Twenty-first Day, by Dr. J. W. S. Gouley.

It ought to be mentioned that a large number of delegates from other State societies and invited guests of distinction from the District of Columbia, Connecticut, New Jersey, Pennsylvania, Massachusetts, Iowa, Michigan and New Brunswick, whose names will he found recorded, came to do honor to the first meeting of the new association. Many of these, and notably Drs. S. W. Gross and Charles B. Nancrede, of Philadelphia, W. C. B. Fifield, of Boston, and M. C. White, of New Haven, took a prominent part in the scientific proceedings, and, as a rule, it may be said that the discussions on the various subjects presented, although perhaps not as full in the earlier part of the session as they might have been, were of the same high standard as the papers which gave rise to them. In the latter part of the volume are printed the minutes of the convention held in Albany, February 4th and 6th, 1884, at which the Association was organized on a permanent basis, the articles of incorporation of the Association, the constitution and by-laws, the national code of medical ethics, the business proceedings of the Association, and the annual report and minutes of the Council.

TRANSACTIONS OF THE MEDICAL SOCIETY OF VIRGINIA, 1884.

The fourteenth annual session of the Medical Society of Virginia, held at Rawley Springs, Rockingham County, Virginia, September 9th, 10th, 11th and 12th, 1884, was, in many respects, a notable one, and its proceedings furnish ample proof that the objects contemplated by this society, which, as its constitution sets forth, are "the collection, diffusion, interchange, preservation and general advancement of medical knowledge throughout the State," are kept strictly in view. The character of the papers read show, as a rule, a high degree of scholarship and carefulness of preparation, and embrace an extensive range of subjects of deep practical importance. The President, Dr. J. Edgar Chancellor, presided over its deliberations with dignity and impartiality.

September 9.—The society having been called to order by the President, an address of welcome was delivered by Dr. Ellzey, of Washington City—the resident physician of the Springs during the summer months—who, on behalf of the managers of Rawley Springs, tendered the hospitality of the place to the members of the Medical Society. Dr. R. J. Hicks then delivered the annual address to the public and the profession. His subject was "Hygiene in Relation to the Private Family." This was an excellent paper, full of useful hints and practical suggestions.

*Wednesday*, September 10.—A report on Advances in Anatomy and Physiology was presented by Dr. H. T. Nelson, which showed extensive acquaintance with the recent literature of the subject, and was well written. Dr. William C. Dabney, the chairman of the committee appointed to seek legislation in regard to the establishment of a State Board of Medical Examiners, read an interesting report, showing how, after earnest effort, a law was passed to regulate the practice of medicine in the State, by the terms of which the Society was given power to appoint a State Board of Medical Examiners, composed of three Examiners for each congressional district.

The President then delivered the annual address. After paying an appropriate tribute to each Fellow who had passed away from earth during the past year, he thus speaks of Dr. Sims: "My duty would be but partially performed were I to omit giving some expression to our feelings at the great sorrow that has fallen upon many of us personally, and upon our society collectively, and I may say upon the nation and the world, in the death of one of our distinguished non-resident Honorary Members and Fellows—that great and good man whose fame and greatness embraced two hemispheres—James Marion Sims—the

Moses of the profession in America, whose genius led it out of the wilderness of uncertainty in teaching us the means of accurate diagnosis in the treatment of diseases of woman."

Dr. Joseph A. White read a volunteer paper on "Naso-Pharyngeal Obstructions and their Relations to Hearing." This paper was illustrated by crayon drawings executed by himself.

*Thursday* September 11.—Dr. Samuel B. Morrison read a report on the Advances in Obstetrics and Diseases of Women and Children. He describes a very interesting case of retro-uterine hæmatocele occurring in a woman, a patient of his, who was in the sixth month of pregnancy. The symptoms exhibiting themselves in the case were such that he felt called upon to interrupt the pregnancy. The method recommended by Dr. Morrison to induce premature labor is hardly justified in the light of modern experience. "Carbolized sponge tents" he says, "are to be carefully introduced between the cervix and membranes, to be repeated and increased in size." In view of the danger of septic infection from the use of sponge tents this method should not be followed, especially, as the method by the introduction of an elastic bougie into the cervix, carried up beyond the os internum between the uterus and the membranes and left *in situ*, accomplishes the purpose with certainty and is free from danger, provided only antiseptic precautions are observed. In regard to Battey's operation Dr. Morrison speaks as follows: "From what I read of his cases and know of results, I am not prepared to say that this operation will stand the test of time. The diagnosis is so often obscure, the field for abuse so wide, I can only see a very rare case that would justify this grave procedure." Dr. John Clopton presented a short report on Advances in Neurology and Psychology. Dr. George T. Harrison, of New York City, who was in attendance by invitation, upon call for a paper from him, read one on the "Modern Treatment of Wounds," which has already appeared in this Journal. Dr. Alexander Harris read a report on the "Medical Properties and Therapeutic Application of Fauquier White Sulphur Springs." "It is shown," he observes, "that this water holds in solution ready for brain restoration, nearly three grains per gallon of the phosphates of iron, lime and magnesia. The point which I desire to emphasize is the variety of phosphates generally, and especially of ferric phosphates, in the mineral waters of this country and Europe, and the richness of this water in them. To this fact is doubtless due its remarkable energizing powers—rapid increase of nerve power and body weight here being uniformly acknowledged—and every season at the Springs furnishes striking examples of it." Dr. T. M. Miller presented the report of the committee on "The Therapeutic Value of the Waters of Rawley Springs, Virginia." After giving the analysis by Prof. Mallet, of the University of Virginia, of the water from the main fountain at the Springs, the result of which shows, says Prof. Mallet, "that the water contains mainly carbonate of protoxide of iron dissolved by free carbonic acid;" the committee report that they are satisfied "that the water is specially applicable in that wide range of cases in which there is anæmia and its consequences in the multiform disturbances of nutrition and innervation, and generally where iron is indicated under circumstances requiring its form in a condition acceptable to the digestive organs, and not demanding astringency; and it is doubtful whether there be any other form of iron more acceptable to the palate and stomach, more easily assimilated, more prompt in its action, and of greater efficiency." By request of this committee, Dr. F. M. Robertson, of Charleston, S. C., Fraternal Delegate from the South Carolina Medical Association, read a paper entitled "The Medicinal Properties of the Chalybeate Waters of the Rawley Springs." This paper was a most valuable one, and a knowledge of its contents would be of benefit to many a physician who is not aware of the therapeutic power of these waters. In concluding his paper he remarks: "At this delightful mountain resort, 2,000 feet above the level of the ocean, in the magnificent North Mountain range, with pure air, wild and beautiful scenery, comfortable quarters, good company and genial companionship; the invalid has all that can be desired as auxiliaries to the medicinal properties of the water." "Intestinal Obstruction—Its Differential Diagnosis," was the title of a paper by Dr. Hunter McGuire. He gave a number of illustrative cases, showing the necessity of making, as far as possible, an early and positive diagnosis for the purpose of operating, if necessary. He showed the different modes in which this condition was brought about and how operative treatment often offered prospect of recovery. The use of purgatives he condemned, while opium he regarded as the sheet-anchor in these cases.

Dr. Wm. H. Coggeshall, of Richmond, read a paper upon "Etherization by the Rectum." He adduced evidence to show that this mode of effecting anæsthesia is not so modern as some recent writers have supposed, and having given a summary of the cases in which ether had been thus administered as far as he had been able to find them on record, gave the history of two cases which had occurred in his own practice. His conclusions are, that in operations in the mouth or about the face, when the use of the napkin or cone as an inhaler would interfere with the operator, etherization per rectum is, perhaps, the plan to adopt to induce anæsthesia; but in ordinary surgical cases the inhalation of chloroform is preferable.

Dr. M. A. Rust, of Richmond, read a most interesting paper on typhoid fever. This was followed by a paper from Dr. J. S. Stone, on the use of massage and electricity in the "Treatment of Chronic Hysteria and Allied Nervous Diseases." Dr. Stone gives illustrative cases to show the efficacy of this method of treatment, and his paper is well worthy of perusal for the class of medical men for whom it was particularly written, *i. e.*, general practitioners.

September 12.—On this, the last day of the session, there was a discussion of the subject selected for general debate, "Malarial Fever." The first paper read pertaining to this theme was from the pen of Dr. R. B. Stover, on the general subject of malarial fever. Dr. John N. Upshur then read a paper on malarial fever, as it existed in Richmond, Va., in the spring and summer of 1884. Dr. Robinson, of Danville, Va., gave his views upon the subject of typho-malarial fever, and attempted the task of furnishing such criteria as might serve as a basis on which to rest the differential diagnosis between typho-malarial fever and typhoid fever.

A very interesting paper was presented by Dr. Edward E. Field, on "Yellow

Chills," a comparatively recent manifestation of malaria. In the discussion which followed, Dr. T. J. Moore, of Richmond, made some excellent practical suggestions in regard to the hypodermic use of quinine. Dr. Upshur denied the existence of typho-malarial fever as a distinct disease, and insisted that the lesions of the so-called typho-malarial fever were identical with typhoid fever. Dr. Rust concurred in these views advocated by Dr. Upshur. Any account of this meeting at Rawley Springs would be incomplete without reference to the banquet tendered by the management of the Springs Company to the Medical Society. It was a delightful affair, and one which will long be remembered by those who participated in its scenes and incidents.—G. T. H.

ORTHOPÆDIA, OR A PRACTICAL TREATISE ON THE ABERRATIONS OF THE HUMAN FORM. Second edition, enlarged, with additional engravings and several colored lithographs. By JAMES KNIGHT, M.D., Surgeon-in-Chief to the New York Society for the Relief of the Ruptured and Crippled, etc., New York: J. H. Vail & Co. 1884. Pp. 396.

When the first edition of this work appeared the late editor of the Journal wrote in a review of it: "The reader will find in reading this singular aggregation of subjects (rachitis, paralysis, procidentia uteri, ectropion vesicæ, relaxed abdomen, varicose veins, bursæ, diseases of the joints, tonics and their effects upon the system, contraction of the hands, fingers and toes, antero-posterior and lateral curvature of the spine, etc.,) under the title of 'Orthopædia,' not only that such a title is a practical *non-sequitur* and an absurdity, but he will also see that the range of the author's studies is far beyond that which is indicated in the title of his volume. These various subjects are not only presented under this unique title or caption, but they are really well presented. The work abounds in much valuable information, and is really one of the few in this connection of genuine interest to the general practitioner. It is profusely illustrated, and the illustrations answer the purposes intended most admirably. The general reader will find the carefully executed drawings of apparatus of various kinds, with the method of their application and the bandaging necessary for applying these, very acceptable." In the present edition considerable new matter and a number of new illustrations have been added. Of the four chromo-lithographs, which are remarkably brilliant specimens of coloring, the first plate shows the head of the femur with ulcerated cartilage and inflamed round ligament and synovial membrane, also a bisection of the same bone taken from Coulson. ("Medico-Chirurgical Transactions," vol. xviii.) The second (from the same source), shows the margin of an acetabulum presenting ulceration and the head and neck of a diseased femur. The third admirably represents the vertical section of the head of a diseased femur and that of the sound limb in the same subject. The fourth exhibits the remarkable condition found at the autopsy in a case of spinal caries resulting in paralysis. On examining the spinal column anteriorly there was found, extending one inch to either side and two inches in length, a sac containing cheesy matter. A vertical section of the column from before backward showed the body of the eighth dorsal vertebra to be almost entirely gone, and the sixth, seventh and ninth largely involved; while in place of the eighth there was a quantity of pultaceous, curdy matter pressing upon the spinal cord. The cord itself at the locality of the seventh and eighth vertebræ was anæmic, yellowish and small in size, probably from fatty degeneration in the nerve-cells. In the section on Potts' disease, the author states that he is now using the same spinal brace that he devised over twenty years ago, and it is to be noted that no reference whatever is made to the plaster-of-Paris treatment, which has attracted so much attention and been so successfully employed within the last few years.

## BOOKS AND PAMPHLETS RECEIVED.

Human Osteology. By Luther Holden, Assisted by James Shuter, F.R.C.S., etc. Sixth edition. Wm. Wood & Co., New York.

Kirke's Hand Book of Physiology. By W. Morrant Baker, F.R.C.S., and Vincent Dormer Harris, M.D. Eleventh edition. Two volumes. Wm. Wood & Co., New York.

The Physician Himself. By D. W. Cathell, M.D. Fourth edition. Cushings & Bailey, Baltimore.

Typhoid Fever and Low Water in Wells. By Henry B. Baker, M.D. (Reprinted from the Annual Report of the Michigan State Board of Health for the year 1884.)

International Medical Congress. Ninth session. To be held in Washington, D. C., in 1887, Rules and Preliminary Organization. Washington, D. C. 1885.

The Hygiene of the Nervous System and Mind. By C. H. Hughes, M.D. (Reprinted from the *Alienist and Neurologist*, January, 1885.)

Address in Medicine. Delivered before the Medical Society of the State of Pennsylvania, by W. H. Daly, M.D., at its Annual Meeting, held in Philadelphia, May 1884.

Proceedings of the Twenty-ninth Annual Session of the Kentucky State Medical Society. 1884.

The Physiological Effects and Therapeutical Laws of Hydrastis. By Roberts Bartholow, A.M., M.D., LL.D. (Reprinted from *Drugs and Medicines of North America*, March, 1885.)

Experimental Researches on Cicatrization in Blood Vessels after Ligature. By N. Senn, M.D. (Extracted from the Transactions of the American Surgical Association. Vol. ii, 1884.)

The Oleates: Further Investigation into their Nature and Action. By John V. Shoemaker, A.M., M.D. (Extracted from the *British Medical Journal*, October 14, 1884.)

The Treatment of Diseases of the Skin by Novel Methods. A paper read before the Section of Dermatology and Syphilis at the Meeting of the International Medical Congress at Copenhagen, 1884. By John V. Shoemaker, A.M., M.D.

Medical Jurisprudence in Divorce. By Carl H. Von Klein, A.M., M.D. (Reprinted from the *Journal of the American Medical Association*, February 14, 1885.)

The Use of the Aspirator in Hydro-Thorax. By E. D. Ferguson, M.D. (Reprinted from the *New York Medical Journal*, January 31, 1885.)

Transactions of the American Dermatological Association. Eighth annual meeting. Official Report of the Proceedings by the Secretary, W. T. Alexander, A.M., M.D.

The Physician's Monitor for 1885. W. A. Townsend, Publisher, New York.

The Cumberland Almanac for the Year 1885. Supplement to the *Nashville Journal Medicine and Surgery*, March, 1885.

Superintendent's Report of the Eastern North Carolina Insane Asylum for the Year of 1884.

Annual Report of the Board of Managers of the New York State Reformatory, at Elmira, for the Year Ending September 30, 1884.

Seventh Annual Report of the Presbyterian Eye, Ear and Throat Charity Hospital. Baltimore.

# PHARMACY AND THERAPEUTICS.

## A COMPARISON OF WEIGHTS, MEASURES, ETC., PREPARED BY REQUEST FOR CONVENIENCE OF READERS.

### FRENCH WEIGHTS IN TROY WEIGHTS.

| | | | |
|---|---|---|---|
| 1 milligramme | equal to | 1-65th | grain. |
| 1 centigramme | " | 1-6th | " |
| 1 decigramme | " | 1½ | grains. |
| 1 gramme | " | 15 | " |
| 1 decagramme | " | 150 | " |
| 1 hectogramme | " | 1.465 | " |
| 1 kilogramme | " | 14,720 | " |
| 1 myriagramme | " | 145,824 | " |

### FRENCH MEASURES OF LENGTH IN ENGLISH MEASURES OF LENGTH.

| | | | |
|---|---|---|---|
| 1 millimetre | equal to | 1-1,000th | metre. |
| 1 centimetre | " | 1-100th | " |
| 1 decimetre | " | 1-10th | " |
| 1 metre | " | 39 37-100th | inches. |
| 1 decametre | " | 10 | metres. |
| 1 hectometre | " | 100 | " |
| 1 kilometre | " | 1,000 | " |
| 1 myriametre | " | 10,000 | " |

### FRENCH MEASURES OF CAPACITY IN ENGLISH MEASURES OF CAPACITY.

| | | | | |
|---|---|---|---|---|
| 1 millitre | equal to | 15 | troy grains | water. |
| 1 centiiitre | " | 150 | " | " |
| 1 decilitre | " | 1,500 | " | " |
| 1 litre | " | (1 qt.) 15,000 | " | " |
| 1 decalitre | " | 150,000 | " | " |
| 1 hectolitre | " | 1,150,000 | " | " |

NOTE.—1 grain troy is equal to 1 and 8-100ths grains in apothecary's weight.

### TEMPERATURE AND WEIGHT.

| | | |
|---|---|---|
| 1 lb. water at 60 deg. F. | equal to | 79-100ths pint, or 6.067 22-100ths minims. |
| 1 oz. " " | equal to | 1 5-100ths fl. oz., or 505 60-100ths minims. |
| 1 gr. " " | equal to | 1 5-100ths minims. |
| 1 fl. drachm water at 60 deg. F. | | 56 96-100ths grains. |
| 1 fl. oz. " " | | 455 69-100ths " |
| 1 fl. gallon " " | | 231 cubic inches. |
| 1 fl. pint " " | | 28 87-100 " |

### TEMPERATURES.

CENTIGRADE.—To convert Centigrade (C.) or Celsius to Fahrenheit—multiply by 9, divide by 5, and add 32. Thus: 40 deg. C. multiplied by 9 equal 360 deg.; divide by 5, equal 72 deg.; add 32, equal 104 deg. F.

REAUMUR.—To convert Reaumur (R.) to Fahrenheit—multiply by 9, divide by 4, and add 32. Thus · 40 deg. R. multiplied by 9 equal 360 deg.; divide by 4, equal 90; add 32, equal 112 deg. F.

### PERCENTAGE OF ALCOHOL IN WINES, LIQUORS ALES, ETC.

Strong Port 25, Madeira 24, Sherry 19, Malaga 17, Brandy 53, Rum 53, Gin 51. Whiskey 52 to 54, Burgundy 14, Sauterne 14, Champagne 12 to 14, Tokaya 9, Rudesheimer 10, Catawba 8 to 10, Cider 6 to 9, Mead 7, Burton Ale 8, Scotch Ale 6, Brown Stout 6, Porter 4, Strong Claret 17, Chateau Latour 9, Hock 9 to 12, Lachryma Christi 19, Vin Ordinaire 10.

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## SOME CONSIDERATIONS ON PEPSIN. By J. J. CALDWELL, M.D., Baltimore, Md.

(FOR GAILLARD'S MEDICAL JOURNAL.)

Mothers should always keep in the nursery a preparation of soda or of soda and pepsin, to add to the milk if they detect the shadow of sourness in it. Starch is one of the troubles of infantile digestion, and a good article of pepsin will greatly aid in effecting a thorough digestion of this colicky agent by converting an injurious into a beneficial agent of food; for starch makes sugar, and sugar makes fat. Some alkali then, which does not cause irritation to the stomach, or thin the blood by any process of defibrination, as the potash salts, will serve a good purpose in ridding the child's milk of deleterious properties. This does not obtain so much for children able to derive their sustenance from the natural maternal fountain, the breast.

One of the most reliable preventives of gastric and intestinal diseases is found in pepsin, when properly prepared. The physician who fails to prescribe pepsin in stomach and bowel disorders, to which old people and children are liable, deprives both himself and his patients.

Whatever lessens the albuminous elements in the urine of Bright's disease assists in overcoming the difficulty of digestion. In this affection tripe for dinner and rhubarb pies for dessert have long held their own, their beneficial effects being promoted by the regular use of pepsin, in some good tonic, as the elixir of cinchona or gentian. In a milk diet, which is strongly recommended by Prof. Tyson, of Philadelphia, in his valuable work, entitled "The Various Forms of Bright's Disease," we have the elements of nutrition and of elaboration in the salts of the milk; yet the large amount of albumen in the milk food tends to lessen rather than augment this product in the urine.

Indeed, with plenty of good rich milk, peptonized, and with a willingness on the part of the patient to submit to absolute rest in bed, we have the best conditions possible for promoting the successful treatment of this grave malady.

When a solution of pepsin has been alkalized and afterwards rendered acid, it ceases to dissolve albumen. A watery solution of pepsin speedily decomposes urea. With the addition of muriatic acid, it will not again dissolve this material; but pepsin in solution will not become impaired if glycerine be added, say a little over half the amount of glycerine to the vial of liquid pepsin. Such is sold as liquid pepsin, and so dispensed in prescription. Milk is coagulated by the addition of pepsin, because of the large amount of albumen in the serum of the milk. Sheffer found that one part of pure pepsin coagulated 80,000 parts of this fluid. Lehmann obtained from gastric juice a little over one-tenth per cent. of free muriatic acid and nearly one-half per cent. of lactic acid. The pepsin of Carl J. Jensen, of Philadelphia, is regarded as the standard of pure pepsin. I do not mean for a moment to say that some other preparations may not be as good; but both physicians and pharmacists appear to prefer it, and I only speak from the best stand-point I can obtain. Jensen's crystal pepsin, which has received the name of crystal (not crystallized, as it is often erroneously called) simply from its peculiar glistening, crystal-like appearance, is (without the addition of an acid) perfectly soluble in water, and not precipitated by common salt, therefore a peptone with very great pepsin effect; " one which is capable of dissolving over five hundred times its weight of hard-boiled albumen." The property belonging to all other preparations of pepsin, of containing chlorides, is totally wanting in Jensen's.

In experimenting with this pepsin, having boiled an egg about five minutes and crushed it up uniformly fine, I made the solution with pepsin and water, and allowed time for the pepsin to dissolve. I then divided the solution so as to obtain one-fourth gr. of the pepsin to 800 or 1,000 grs. of albumen in 1½ oz. water. I then added 13 drops of hydrochloric acid (concentrated), and placed the bottle of solution in water at 105° F. (Temperature of the stomach during digestion). I frequently shook the bottle to wash the peptone formed around each particle of albumen, which prevents the free action of the pepsin. From the above experiment I had a perfect solution of the boiled albumen; and I would further say that in my practice the administration of this valuable remedy has proven entirely satisfactory.

Dr. Richardson says that in his experiments with it at the Laboratory of the University of Pennsylvania he has dissolved 700 times its weight of albumen, and Dr. Jensen has succeeded in dissolving 1,000 times its weight. In addition to the ordinary uses of pepsin, it is also of service in dissolving blood clots in the bladder, and membranes in the throat in cases of diphtheria. For the latter purpose it should be employed in a hot acidulated solution by means of a spray, every fifteen or twenty minutes.

### THE THERAPEUTIC USES OF PERMANGANATE OF POTASH. A Résumé of the Results of Investigations recently made, with remarks. By ROBERTS BARTHOLOW, M.D., Professor of Materia Medica in the Jefferson Medical College of Philadelphia.

The therapeutic uses of permanganate of potash ($K_2\ Mn_4\ O_7$) have been investigated for some time past, not only in England, but on the continent and in America. It has long enjoyed a reputation as a deodorizer, and this property it owes to the facility with which it parts with its oxygen in the presence of unstable organic compounds, resulting in their immediate and complete oxygenation or combustion. It is less efficacious but by no means without value as an antiseptic. It is second only to bichloride of mercury in the list of antiseptics drawn up in order of merit by Dr. Miguel in the *Bulletin Gen. de Thérap.*, vol. 107, page 80, but the fact of its not being a virulent poison like the bichloride compensates in many cases for this inferiority. The property of deodorizing has nothing necessarily in common with that of a germicide, except in those cases where the smell itself seems to constitute the *fons et origo mali.* Thus, brought into contact with snake poison it decomposes and renders it inert, a property first ascertained by Lacerda, who instituted a series of experiments with a view of proving the practicability of neutralizing the poison in the blood by internal administration or injection into the veins; but these experiments were unsuccessful, although the unsuccess was probably attributed to the small proportion of the salt which is enabled to reach the blood, the effect of the salt being merely chemically antidotal and not physically antagonistic. Its action, then, is in this respect purely local, but this local action is rapid and reliable; poisoned bites and stings are at once relieved, and further symptoms obviated by the immediate application of a strong solution to the site of injury. Its action when applied as a strong solution to an abraded surface is to cause some tingling and smarting, with some superficial escharotic action. When mixed with water in the proportion of two to five grains to the ounce, it is of service in recent gonorrhœa, leucorrhœa and suppurative buboes; the latter being aspirated, and when the contents have been drawn off the cavity is filled with a ten grain to the ounce solution.

It is, moreover, extremely probable, with the results of Lacerda's experiments on snake poison in view, that its local application to an infective chancre may be productive of excellent effects. In all forms of unhealthy and sloughing syphilitic sores—in sloughing phagedæna, for example—its employment in the form of a fine powder sprinkled over the sore is signally efficient in promoting local recovery. Its efficacy as a wash in ozena, otorrhœa and offensive sweating of the feet or axilla are probably too well recognized to require notice.

Internally it is somewhat irritating to the stomach if unduly concentrated or in too large a dose, but if administered in doses of two or three grains, well diluted, no such effect will be produced. The possibility of its being directly absorbed into the blood has been denied on account of the alleged appropriation of its oxygen by the organic constituents of the mucous membrane, but physiological and clinical facts point to the fact of such absorption taking place.

Inasmuch as the theoretical advantages of the internal administration of this drug are attributable to the nascent oxygen, or rather ozone, which is the result of its decomposition, it is desirable as well as interesting to ascertain in the first instance what the effect of this agent is. The recent studies of Binz (*Berliner Klin. Wochens.*, No. 43, 1882) are particularly instructive in this respect. He finds that the ozone has a hypnotic action, a calmative effect on the central nervous system, due, he supposes, to an impression on the cells of the gray matter, whereby this functional activity is suspended. In some trials on his own person he experienced the following results: His respiration became deeper and more easy, and he had that feeling of well-being produced in the healthy by the respiration of a pure and exhilarating atmosphere. Some drowsiness came on, with an agreeable languor, and afterwards there was experienced some heaviness in the head (hebetude), together with a general sense of fatigue, but no other disagreeable sensations.

The powers possessed by the permanganate of potassium as a general stimulant are well exhibited in the active emmenagogue property which it has been shown to possess by Drs. Ringer and Murrell. In cases of amenorrhœa due to torpor, anæmia, or deficient activity of the menstrual apparatus, it seems to promote the functions to a remarkable degree when given in doses of two to five grains three times a day for several days prior to the menstrual molimen. It is contraindicated in cases of acute congestion, or where a general condition of sthenic reaction exists. The same power which can so stimulate the sexual functions must, when exerted in other directions, prove equally effective.

As this drug is possessed of a more or less irritating quality, its use is contraindicated in cases of acute inflammation of the stomach. It is especially indicated in cases of chronic gastric and gastro-intestinal catarrh accompanied by fermentative changes in the food. Eructations of gas, vomiting of a yeast-like material containing sarcinæ, and an acid fermentation of the starchy and saccharine constituents of the food, are often relieved very promptly by the administration of this salt. As the action is intended to be restricted to the stomach contents, the proper time for its exhibition is two or three hours after meals.

When it is found that the catarrhal process extends into the duodenum, and involves also the bile ducts, this remedy has seemed to be highly efficient, and this in several ways—it checks fermentation, acts favorably on the catarrh of the mucous membrane, but especially promotes oxidation in the tissue undergoing metamorphosis, and while it stimulates metabolism, helps to consume in the normal way the product of waste. Uric acid, which appears in the urine, under the action of permanganate of potash is converted into urea, the form in which it is normally excreted. It follows, then, that it is a remedy of great value in lithæmia. It follows, too, that it must also be useful in affections cognate to lithæmia, viz., the hepatic form of glycosuria; and here again clinical experience confirms physiological observation. The special field of its usefulness in relation to diabetes is in those cases in which there appears to be an overproduction of glycogen and insufficient consumption or combustion or oxidation of this material. It will be found most useful in obese subjects of glycosuria in whom the presence of much uric acid in the blood signifies at the same time inadequate preparation for absorption of certain food constituents by a supply of oxygen insufficient to convert uric acid into urea. For the same reason it is a remedy for obesity, although, of course, a judicious dietary and exercise must be obtained at the same time. Under suitable conditions, the surplus and useless materials which under existing circumstances are converted into fat are oxidized and consumed.

*Method of Administration.*—As this salt is so readily decomposed, it is obviously necessary to be very careful in preparing and administering it. The best methods are to give it either in pure water or in compressed tablets as pellets. I have found Wyeth Tablets, prepared in the way suggested by Dr. Murrell, a convenient and reliable vehicle for administering the drug, as they contain no extraneous material, the presence of which might deteriorate from its stability.

The solution should be well diluted when taken, and should be given when the stomach is empty. A small dose repeated at short intervals, say a grain or two every half-hour till four to six grains have been taken, is preferable to the exhibition of the amount in one dose. Given in this way, and commencing the administration about four hours after meals, the diffusion of the salt into the blood is probably secured.

There are two periods during the day when it can be given—the proper interval after breakfast and after dinner or luncheon. The same considerations should govern the administration of the pellets or tablets or compressed pills undissolved, and sufficient pure water should be taken after them.—*Med. Press.*

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DRUG ADULTERATION IN MASSACHUSETTS.—In a supplement to the fifth annual report of the Massachusetts Board of Health, Dr. B. F. Davenport, Analyst of Drugs, gives the report of a large number of analyses made by him, from which we learn that out of 680 samples of U. S. P. drugs examined 284, or 41.67 per cent., were adulterated. At the conclusion of the report he states that he has thus far acted for the Board as expert in seven prosecutions for violation of the Adulteration Act. In all of these the fact of an adulteration existing was proved, although in the first and the last case the defendant escaped being held therefor.

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# ORIGINAL CORRESPONDENCE.

## "M'DADE'S REMEDY."

*To the Editor of Gaillard's Medical Journal:*

DEAR DOCTOR: Why is it so difficult to solve so simple a question as the one of Dr. Sims' unqualified endorsement of the so-called McDade Remedy? This extensively circulated reccommendation has given more character to a comparatively, if not absolutely, worthless nostrum, than it could have ever acquired in any other way. In the first place, we take it that for many years; even if he ever did do so, this great Gynæcologist had paid but little attention to venereal diseases. Secondly, a moment's reflection ought to recall the fact, that at the period in the profession when such great results were thought to be achieved by the author of this compound decoction, there were recognized but two venereal diseases, gonorrhœa and one kind of syphilis. Hard and soft chancre were regarded merely as manifestations of different types of one and the same disease, the distinction between true and spurious syphilis not being at that time recognized. All venereal affections with sores, whether hard or soft, were considered syphilitic, and treated as constitutional. The local applications varied greatly, but were all employed with two prominent objects in view to destroy the specific virus and to heal the local lesion. At the present day it is well known that all cases of chancroid will recover with local treatment alone; and as all cases of chancroid at that period were treated both locally and constitutionally, under the then prevailing error, as genuine syphilis, McDade's remedy got the credit in a large number of instances in which it was resorted to for its supposed constitutional effect; the same might have been said in the same cases of mercury and iodide of potassium. This indiscriminate diagnosis and treatment gave character to many so-called root remedies, Indian specifics, etc. Local treatment, cleanliness and care will cure chancroid without the McDade remedy or with it as you please, and did at the time of its introduction. True chancre, on the other hand, did not then, any more than it will now, recover under the use of McDade and local treatment, and mercury and iodide of potassium had in fact to be used then as they have to be used now. In reality McDade's remedy amounts to nothing, unless as a simple stomachic and tonic; but under the mistaken idea of syphilis, formerly prevalent, it got the credit of curing from 50 to 75 per cent. of all cases. These considerations, it seems to me, afford a reasonable and satisfactory explanation of the mistake made by Dr. Sims in this matter. J. T. FRY.

## MISCELLANEOUS.

International Medical Congress.—The rules and preliminary organization of the ninth session, to be held in Washington, D. C., in 1887, have been issued in a pamphlet by order of the Executive Committee. The Congress is to be composed of members of the regular medical profession, and of such persons as may be specially designated by the Executive Committee, who shall have inscribed their names on the Register of the Congress, and shall have taken out their tickets of admission. The American members of the Congress are to be appointed by the American Medical Association, by regularly organized State and local medical societies, and also by such general organizations relating to special departments and purposes as the American Academy of Medicine, American Public Health Association, American Surgicial Association, etc., each of the foregoing societies being entitled to appoint one delegate for every ten of its members. The work of the Congress is divided into nineteen sections. Notices of papers to be read in any of the sections, together with abstracts of the same, must be sent to the Secretary of that section before April 30, 1887. No communication will be received which has been already published, or read before a society. All addresses and papers read either at general meetings or in the sections are to be immediately handed to the Secretaries. The Executive Committee, after the conclusion of the Congress, shall proceed with the publication of the transactions, and shall have full power to decide which papers shall be published, and whether in whole or in part. The official languages are English, French and German, and the rules, programmes, and abstracts of papers will be published in these three languages. Each paper or address will appear in the transactions in the language in which it was delivered by the author; but the debates will all be printed in English. In the preliminary organization Dr. Austin Flint, of New York, is President, and the Vice-Presidents are Drs. Henry I. Bowditch, of Boston; Henry F. Campbell, of Augusta, Ga.; Nathan S. Davis, of Chicago; R. Palmer Howard, of Montreal; Levi C. Lane, of San Francisco; and Tobias G. Richardson, the Chairman of the Committee on Finance; Dr. William Pepper, of Philadelphia, the President of the American Medical Association, the Surgeon-General of the U.S. Army, and the Surgeon-General of the U.S. Navy. The Secretary-General is Dr. John S. Billings, U.S.A., of Washington, and the Treasurer Dr. John Mills Browne, U.S.N., of Washington. The General Committee consists of twenty-eight members, and the Executive Committee, of which Dr. I. Minis Hays, of Philadelphia, is Chairman, of eight members. The following are the Presidents and Secretaries of the various sections:

1. *Medical Education, Legislation and Registration.*—President, Dr. Henry P. Bowditch, of Boston; Secretaries, Dr. Samuel J. Mixter and William P. Whitney, of Boston.
2. *Anatomy.*—President, Dr. Joseph Leidy, of Philadelphia; Secretaries, Drs. William W. Keen and George E. De Schweinitz, of Philadelphia.
3. *Physiology.*—President, Dr. John C. Dalton, of New York; Secretary, Dr. John G. Curtis, of New York.
4. *Pathology.*—Dr. Francis Delafield, of New York; Secretaries, Drs. Theophile M. Prudden, of New York, and William H. Welch, of Baltimore.
5. *Medicine.*—President, Dr. J. M. Da Costa, of Philadelphia; Secretary, Dr. William Osler, of Philadelphia.
6. *Surgery.*—President, Dr. David W. Yandell, of Louisville; Secretary, Dr. J. Collins Warren, of Boston.
7. *Obstetrics.*—President, Dr. T. A. Reamy, of Cincinnati; Secretary, Dr. P. F. Mundé, of New York.
8. *Gynœcology.*—President, Dr. Robert Battey, of Rome, Ga.; Secretaries, Dr. J. R. Chadwick, of Boston, and George J. Engelmann, of St. Louis.

9. *Ophthalmology.*—President, Henry D. Noyes, of New York; Secretary to be announced hereafter.

10. *Otology.*—President, Dr. Clarence J. Blake, of Boston; Secretary to be announced hereafter.

11. *Dermatology and Syphilis.*—President, Dr. William A. Hardaway, of St. Louis; Secretary, Dr. Arthur Van Harlingen, of Philadelphia.

12. *Nervous Diseases and Psychiatry.*—President, Dr. S. Weir Mitchell, of Philadelphia; Secretary, Dr. Charles K. Mills, of Philadelphia.

13. *Laryngology.*—President, Dr. George M. Lefferts, of New York; Secretary, Dr. D. Bryson Delavan, of New York.

14. *Public and International Hygiene.*—President, Dr. H. A. Johnson, of Chicago; Secretary to be announced hereafter.

15. *Collective Investigation, Nomenclature and Vital Statistics.*—President, Dr. N. S. Davis, of Chicago; Secretary, Dr. James F. Todd, of Chicago.

16. *Military and Naval Surgery and Medicine.*—President, Dr. D. L. Huntington, U. S. Army; Secretary, Dr. Benjamin F. Pope, U. S. Army.

17. *Practical and Experimental Therapeutics.*—President, Dr. H. C. Wood, of Philadelphia; Secretaries, Drs. E. T. Reichert and Robert Meade Smith, of Philadelphia.

18. *Diseases of Children.*—President, Dr. A. Jacobi, of New York; Secretary, Dr. T. M. Rotch, of Boston.

19. *Dental and Oral Surgery.*—President, Dr. Jonathan Taft, of Cincinnati; Secretaries, Drs. E. A. Bogue, of New York, and G. H. Cushing, of Chicago.

THE "INDEX MEDICUS."—It was with profound regret that every one interested in the advancement of medical science, and especially the welfare and standing of the profession in America, learned of the suspension of this publication, and therefore the following announcement will be correspondingly welcome. The very great value of this work has been sufficiently attested, both in this country and throughout Europe, and Mr. Davis is certainly worthy of all praise for his generous offer to carry it on. May it not be hoped that it will receive in the future a more cordial support than it has hitherto done?

WE take pleasure in announcing that Mr. George S. Davis, of Detroit, has undertaken to continue the publication of the *Index Medicus*, on the same general plan, and with the same regard to typographical accuracy and finish as heretofore. On account of the delay required to perfect this arrangement, the first number of the journal for the current year will comprise the literature of January, February and March, after which it will appear monthly, as usual. At the end of the year, in addition to the usual annual index of names, subscribers will be furnished with an index of subjects to the volume. So many expressions of regret and urgent remonstrances in regard to the threatened discontinuance of the *Index Medicus* have been received, that we think we may venture to congratulate the profession on Mr. Davis's public-spirited determination to carry on the enterprise in spite of the fact that thus far it has not been pecuniarily remunerative. It is requested that all exchanges, and books and pamphlets for notice, be sent to the *Index Medicus*, Washington, D. C.

JOHN S. BILLINGS, M.D.,
ROBERT FLETCHER, M.D.

PROF. SAYRE'S FIRST APPEARANCE IN PUBLIC.—When La Fayette visited America in 1824, he went from New York to make a pilgrimage to Washington's old headquarters at Morristown, N. J., now in the possession of the State, and was greeted with unbounded enthusiasm at every point along the route. At Bottle Hill, at the present time known as Madison, a hamlet about four miles from Morristown, he was entertained with a collation at the village hotel; and on this occasion he listened with evident pleasure to an address of welcome and a poem delivered by two of the youngest pupils at the Madison Academy (named after President Madison), an institution of much repute at that time, which was under the management of Mr. John T. Derthick. The poem was recited by Master Lewis A. Sayre, who had then arrived at the venerable age of four years and six months, and who was sent by his parents, who resided at Bottle Hill, to the academy, more for the purpose of being kept out of mischief, as he says, than with any idea of his becoming deeply versed in classic or historic lore. By a curious train of circumstances, Dr. Sayre has only recently come into possession of a copy of this effusion, which was written by the principal of the school, and printed on a white satin badge, containing also a portrait of La Fayette; having obtained it from the son of Col. William Britton, who commanded the local regiment of militia at the reception to the distinguished guest of the day. As it is highly desirable at the present time that a patriotic sentiment and a warm feeling of gratitude for the invaluable services rendered the nation by France during the Revolution should be aroused among the American people, the verses are herewith appended, in the hope that some of our friends, who have not already done so, may be induced to contribute towards the erection of the pedestal for the Bartholdi Statue of Liberty, now awaiting shipment to our shores.

### General La Fayette.

*Welcome to the Land of Liberty.*

Hail patriot, statesman, hero, sage!
  Hail, freedom's friend; hail, Gallia's son,
Whose laurels greener grow in age,
  Pluck'd by the side of Washington!
Hail, champion in a holy cause,
  When hostile bands our shores beset,
Whose valor bade th' oppressor pause,—
  Hail, hoary warrior, La Fayette!

Whene'er the lips of youth inquire
  The path to virtue, honor, fame,
To glory's temple proud aspire—
  While warmly glows the ardent flame—
The voice of age shall fearless tell
  What perils oft its path beset,
And prompt them onward with the spell
  That urged the soul of La Fayette.

And when the shades of death shall close
  For ever round this hallow'd head,
We'll seek the place of thy repose,
  By filial love and duty led;
And hearts that bear in bosoms free—
  Gems by unerring wisdom set—
The living monument shall be
  Of Freedom's champion, La Fayette.

Not much Honor to their Instructor.—In the published Lectures on Medical Jurisprudence, before the Medical Department of the University of Vermont, by Prof. Phelps, the new Minister to England, occurs the following: A physician told me a very amusing instance of a case in which he was summoned from a considerable distance as a witness, where a person had been assaulted by another and had commenced a suit for damages. Some medical gentlemen had examined him and had decided that the claim he set up was correct; that he had become paralyzed in his leg, and in consequence of an injury to certain nerves sustained in the affray. In the consultation they had in regard to the case, these physicians pointed out where the nerves were injured, and how the result claimed had come to pass. "Why, gentlemen," said the witness, "are you aware that the nerves you suppose to be injured do not supply the leg?" No, they had not been aware of that. He sent for a chart of anatomy, and succeeded in making it plain to them that the injury to those nerves would not occasion paralysis of the leg, and the result was the case went off and I do not know what became of it afterwards. "But," I said, "doctor, how could you spoil so good a thing? Why did you not let them testify?" "Well," he replied, "they obtained their education at the school where I was professor of anatomy."

SALIVARY CALCULUS.—At a recent meeting of the New York Pathological Society Dr. E. C. Seguin presented a specimen of salivary calculus which was discharged spontaneously from Steno's duct. The man from whom it came was a patient under general treatment for specific hemiplegia, and, without apparent cause, his right cheek began to swell in front of the parotid gland. When he saw him in the evening there was an indurated swelling opposite the molar teeth, and within the mouth he found the nipplelike projection of the mouth of the duct, from which he forced a number of drops of muco-purulent fluid. He directed the patient to bathe his mouth with hot water, and, on awaking in the morning, he felt something hard upon the inner surface of the cheek, which was the specimen presented. Dr. Seguin said he had met with a similar calculus in Wharton's duct, in a lady of gouty habit. In that case he was able to make a diagnosis with the probe, but the calculus was thrown out spontaneously.

DIABETIS MELLITUS IN A BOY SEVEN YEARS OF AGE.—Mr. James Edwards, M.R.C.S., gives in the *British Medical Journal* an account of a boy of seven, who last summer was a well-developed and well-nourished lad. In the beginning of the winter he began to droop, and it was now noticed that he was continually thirsty, and at the same time passed an unusually large amount of urine. He also grew thinner and complained of headache and thirst, while a whitish powdery film was observed on his clothes. These symptoms becoming aggravated, Mr. Edwards was called in during the early part of January. The thirst was great, the appetite was voracious, and he was extremely thin; his weight having been reduced from 60 to 40 pounds. He was passing about 8 pints of urine in the 24 hours and it was of a pale straw color, acid reaction, specific gravity 1042. It contained no albumen, but a large quantity of sugar. The lungs were healthy, the abdomen large and tympanitic, and the liver slightly enlarged. He also complained of pain on pressure over both kidneys. Opium and a diabetic diet were prescribed. A few days afterwards Mr. Edwards was again called, and found him dangerously ill, with a temperature of 102, pulse small and frequent, mouth dry, constant vomiting, and pain and tenderness over the abdomen. Examination revealed the presence of peritonitis and a considerable quantity of ascetic fluid. The symptoms became worse; a state of coma set in, and he died during the night.

THE RESULT STILL IN DOUBT.—Old Mrs. Bennington—Did ye find out how Mrs. Brown is gittin' on? I heerd she's very sick. Old Mr. Bennington—I saw the doctor as he was drivin' along to-day, an' he said she shuffled off a mortal coil last night. I s'pose it'll do her good to get rid of it. Old Mrs. Bennington—Drat these new-fangled doctors, they can't talk nothin' but Latin. The poor soul may be worse. I'll try an' git over there myself this afternoon.

AN APPARATUS FOR REMOVING DIPHTHERITIC MEMBRANE.—Mr. J. P. Bush, house surgeon of the Bristol Royal Infirmary, calls attention in the *British Medal Journal* to a small instrument which he says has proved of the greatest value during the last two years in removing diphtheritic membrance from the trachea after the operation of tracheotomy. It is simply the ordinary œsophageal horse-hair probang in miniature (the shaft being of the size of a No. 3 English catheter), and its action is precisely the same. Accompanying diagrams represent the instrument (1) closed and ready for introduction into the trachea, and (2) open.

THE TREATMENT OF BRIGHT'S DISEASE.—It is always gratifying to read of success in the management of serious affections, and, therefore, the following communication will no doubt be read with much interest:

BENTON ALA Mch 19th. 85

*To* GAILLIARDS, MD, JOURNALD,
New York

I have cured fourteen cases of Brights disease, I precribe the best treatment for this trouble, Clinic," will take one spoon ful of sulphur one of Pulverized ginger, one of Black snake root, one of cinders or snail (?) dust, one of coriander seed, Misci in honey, Signa give in ten grain doses, five times a day.

If it dont run the water out to much, if so stop and give less, at the same time give gamboge, give Ipecac and Bluemass till the mouth and gums grit, and Bathe the feet and legs in mullen tea, ade, a little nitromuriacid in each bath.

Yours Fraternally
W. JOHNSTON, STODDARD Md.

A PERPLEXED PATIENT.—"You are doing nicely," said the doctor encouragingly to an old darky patient. "I will call again to-morrow, and will leave you this prescription now to save you from pain in the interim." Then he went out. "Da's er 'scription dat de doctah lef," said the patient feebly to his wife, "an' I wan's yo' ter go ter de drug sto' an' git it filled. Tell de drug sto' man dat it's for my interim, and be sho' an' ax him ef I'se ter take it eternally, or jess rub it on de outside, an' ef so, wha'."

THE SANITARY CONDITION OF THE NEW YORK PUBLIC SCHOOLS.—In his report to the Board of Education, Superintendent Jasper says: "As a rule the school buildings and premises have been kept in a proper state of cleanliness by the janitors. The plumbing, the drainage and the closet accommodation have in many cases been greatly improved by the board during the past year, and such changes as the Board of Health have recommended have been attended to. Improvements have also been made in the ventilation of a number of class rooms by additional sashes, transoms, etc., and a simple rearrangement of the furniture has also in some instances guarded against injury to the eyesight of pupils and teachers. The spread of contagious diseases among the pupils has been carefully guarded against by a strict observance of the rules of the Board of Education in reference thereto. During the past year several ample sites have been secured by the board, and commodious school edifices erected and occupied, which are free from the sanitary defects of some of the older and more contracted school premises. In these new buildings the ventilation, the plumbing work, and sanitary matters generally appear to have received proper consideration. These additional accommodations partially supply a great public want, and tend to remedy the evils of overcrowding.

THE LATE PROFESSOR GROSS.—The March number of the *New England Monthly* contains a very fine steel engraving of Prof. S. D. Gross, together with an appreciative memoir.

UNUSUAL MORTALITY FROM PNEUMONIA.—During one of the weeks of March, out of 777 deaths occurring in this city, no less than 149 were due to pneumonia, and during the whole season the disease has proved remarkably fatal.

MARRIAGE OF MRS. TOM THUMB.—The widow of Tom Thumb was married April 6, to Count Primo Magri, an Italian dwarf of about her own height, at the Church of the Holy Trinity, New York. Not long since a fat woman, weighing, according to the announcement on the bill-boards, 596 pounds, was married to a professional " Albino " at a dime museum on the Bowery ; and when the ceremony was completed the band, not inappropriately, struck up the air. " What shall the harvest be ? "

JO-JO, THE DOG-FACED BOY.—During the exhibition of his show at the Madison Square Garden, Mr. Barnum invited a number of medical gentlemen and others to a " private view " of " Jo-Jo, the Russian dog-faced boy." Among those present was Mr. Bergh, the indefatigable president of the Society for the Prevention of Cruelty to Animals ; but it is said that when he had decided to his satisfaction that Jo-Jo, notwithstanding his remarkable resemblance to a Skye terrier, was in reality a human being, and not an unfortunate specimen of the noble canine race who was being forced to personate one of an inferior order, " the subsequent proceedings interested him no more."

NEW YORK MEDICO-LEGAL SOCIETY.—At a meeting of the Medico-Legal Society, held March 18, Dr. Ira Russell, of Winchendon, Massachusetts, read a paper entitled " Increase of Insanity, Causes and Remedies," in which he took very much the same ground as Dr. John P. Gray, in his recent paper before the New York State Medical Association in regard to the necessity for early treatment in all cases where insanity is even remotely threatened. He thought that there should be a society whose duty it should be to see that every such individual received immediate treatment; but it is difficult to perceive how any society could practically carry out this desirable object.

A WOMAN'S HOSPITAL NEEDED FOR IOWA.—In the *Iowa State Medical Reporter*, Dr. J. W. Smith, of Charles City, makes a well-grounded plea for the establishment of such a hospital. While it is not wise to multiply charitable institutions unnecessarily, he says, it appears that there are frequent cases of diseases and injuries peculiar to women that could be treated so much more successfully in a well-managed hospital than in many homes by the average physician, as to justify a State Hospital for Women. The successful work of woman's hospitals elsewhere is sufficient evidence of the great good that they have already accomplished, and he thinks that the medical profession can do more than any other class to convince the public and the legislative authorities of the wisdom and need of such an institution for the State of Iowa.

THE RHINELANDER SHOOTING CASE.—Mr. John Drake, the legal adviser for the Rhinelander estate, who was shot by Wm. C. Rhinelander in June, 1884, has recently died of pneumonia. At the autopsy it was found that the wound from the shot had entirely healed, and that the ball had become encysted in the head of the humerus ; while the bone where the compound fracture had occurred was united by a fibrous growth.

MEDICAL VOLUNTEERS FOR THE SOUDAN.—The *British Medical Journal* says that the committee of the Volunteer Medical Association have placed a company, 60 strong, of the Volunteer Medical Staff Corps, at the disposal of the Director-General of the Army Medical Staff ; though it is at present doubtful how far it may be necessary for the authorities to avail themselves of it. A similar offer has been made by the committee to the National Aid Society, and it is possible that a few, probably six more, may be required. Arrangements are now in progress to give the Volunteer Medical Staff a complete organization, modelled on that of the Army Medical Staff, and the plan is to take effect as soon as the sanction of Parliament is obtained.

THE LADIES' HEALTH PROTECTIVE ASSOCIATION OF NEW YORK held a mass meeting at Steinway Hall on the evening of March 28, when Judge Noah Davis presided, and addresses were made by a number of prominent gentlemen. Such organizations no doubt do good in pointing out abuses and spurring on the health authorities to keep a more watchful supervision over the sanitary welfare of the community, but the zeal of their members is not always "according to knowledge." For intance, a committee of ladies recently reported that a certain cheap lodging house in the lower part of the city was nightly crowded by over 400 inmates, a number which greatly exceeded its proper capacity and rendered it likely to become a hot-bed of typhus fever, or other contagious disease. On investigation, however, it proved that less than 150 lodgers were accommodated, and that the premises were in fair condition as regards sanitary requirements.

CREMATION AT THE 19TH CENTURY CLUB.—"Cremation *versus* Inhumation" was the subject discussed at a meeting of the 19th Century Club, held March 16, when Mr. Andrew Carnegie and the Rev. Dr. John D. Beuglers, Chaplain of the Brooklyn Navy Yard, and President of the United States Cremation Company, which has a crematory in process of construction, advocated cremation, and the Rev. Dr. N. Maynard, Rector of St. Paul's Church, Brooklyn, spoke in favor of inhumation.

THE EVIL OF UNDIGESTED KNOWLEDGE.—The following passage is also from the same source: "The curse of our time is the vast quantity of undigested knowledge that is everywhere prevalent. Thousands of force pumps are at work in all directions forcing knowledge into people. It is wonderful how much men know, and it is wonderful, often, how little good it does them. I might hold up before you in one hand a crystal, symmetrical, translucent, beautiful, and in the other a handful of mud. The one you treasure; the other you throw out of the window. Yet chemistry might inform you that in that handful of mud were all the constituents of the crystal. The difference is that they have not been separated and they have not been crystallized. The silent, mysterious process in the laboratory of nature, which has formed the crystals somewhere and somehow, has not acted upon these crude materials. There is the same difference, as it seems to me, between the mental processes of the man who has knowledge that has been crystallized into clear, distinct, accurate perceptions, and those of the man who is crammed full of knowledge that he has never digested."

ARBOR DAY IN DAKOTA AND PENNSYLVANIA.—The Governor of Dakota has appointed April 15, and the Governor of Pennsylvania April 16, to be devoted to tree planting and other work tending to beautify and make pleasant the homes of the people. What State will be the next to follow their good example?

THE HARVARD MEDICAL SCHOOL.—The Dean of the Harvard School states in his annual report that the occupation of the new building has given to the Faculty the opportunity so long desired of arranging its course of instruction in the full possession of all those facilities for work which modern educational methods imperatively demand; so that the graded system of instruction may now be carried out to the best advantage.

GIRLS PLAYING POLO.—The first recorded polo game on roller skates between females was played at Meriden, Conn., on the 2d of April, before an audience of 1,000 persons. This is nothing more or less, we believe, than the old-fashioned game of "shinny," as it used to be called in our boyhood days; and with a vivid recollection before us of sundry bruises and black-eyes received in its melées, we should not be inclined to pronounce it a particularly gentle pastime for ladies. As on this occasion one young woman was struck by a hockey in the mouth, and another received a severe ankle-blow, which rendered her *hors de combat*, the account of the scrimmage must have been read with no little delight by the physician of the Twilight Club, referred to in the February number of the JOURNAL, who, with an evident desire "to set broken legs and monkey with broken ribs," advocated the playing of football by girls.

THALLIN.—The chemical name for thallin, the new antipyretic, is said to be *etrahydroparachinanisol*, and we should imagine that if a medical student were to be called upon to pronounce it very often, he would be likely to suffer from an elevation of temperature, resulting from acute cerebritis, which the drug would not be apt to readily control.

A CHINESE DOCTOR'S PRACTICE.—It is reported that a Chinese physician in northern California has a practice among Americans amounting to $200 a month. It is to be expected, therefore, that we shall now have the medical profession joining in the cry of the hoodlum, "The Chinese must go." Whether this Mongolian practitioner makes use of the same kind of therapeutic agents that some of his professional brethren do at home is not known. A San Francisco paper says that a Chinaman, near Rochlyn, Cal., made this season a shipment of over 2,000 horned toads, which were to be sent to China, there to be converted into various kinds of medicines, which bring a very high price.

PARSEE PHYSICIANS.—Six Parsee physicians not long since arrived in this city from India, with a view to remaining and practicing here. When they learned how many physicians there were here, they became considerably discouraged; but when informed that they were not so numerous in the South as in New York, they seemed somewhat reassured, and began to talk of getting away to a more congenial climate.

PUCK'S "REALISTIC RECIPE" FOR "HOMŒOPATHIC" MEDICINE.—

A grain of medicine you take
And drop it in Superior Lake;
Mix it and stir it thoroughly,
Then of the mixture in the sea
Put just one drop and stir it well,
So neither taste nor touch nor smell
Of medicine within is found;
Then take of sugar just a pound,
And medicate it with one drop
Of the aforesaid mingled slop,
Each day three times take half a grain,
Till you are dead or free from pain.

This is about as bad as the advice of the homœopathic physician in a play that was acted some time since at Wallack's, who gave his patient a little phial and told him to put five drops of its contents in a quart of water, and take a teaspoonful every Wednesday night.

The Surgical Value of Pepsin.—In the *Medical Brief* for February and March are mentioned two cases of blood-clots in the bladder, both of which terminated fatally. The editor of the *Northwestern Lancet,* however, reports a similar case, in which he injected 20 grains of pepsin (Jensen's) in an ounce of warm water, and in which within twenty minutes he had the satisfaction of seeing the patient pass a full stream of urine and disintegrated blood. In the other cases referred to the use of pepsin does not seem to have been thought of in this connection.

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## MEDICAL NEWS.

School of Mines, Columbia College.—At a meeting of the Board of Trustees of Columbia College, held April 6, Elwyn Waller, Ph. D., Instructor in Quantitative Analysis, was appointed Professor of Analytical Chemistry, and Dr. J. H. Billings, U.S.A., was invited to extend his annual course on hygiene before the School of Mines from twelve to twenty lectures.

Chemical Laboratory at Rochester University. — Preparations are being made for the immediate erection of a chemical laboratory in connection with the University at Rochester, N. Y., the cost of which is to be $25,000.

Death of Dr. James R. Little.—Dr. James Lawrence Little, one of the best known surgeons of this city, died of peritonitis, after a brief illness, on the 4th of April. He was born in Brooklyn in 1836, and pursued his medical studies under the direction of the late Dr. Willard Parker. He was graduated from the College of Physicians and Surgeons, New York, in 1860, having previously served six months, as medical junior assistant, at Bellevue Hospital, and upon receiving his degree was appointed to the surgical house-staff of the New York Hospital. At the end of two years he was made surgeon-in-charge of the Park Barracks, and in 1863 was appointed clinical assistant to the chair of surgery in the College of Physicians and Surgeons, with a spring lectureship on fractures. In 1868, when a regular Summer faculty was formed, he was appointed lecturer on operative surgery and surgical dressings, a position which he retained for more than ten years. In 1875 he accepted the chair of surgery in the University of Vermont, though still retaining his residence in New York, and more recently the senior professorship in the New York Post-Graduate Medical School. Among the other positions that he held was that of surgeon to St. Luke's and St. Vincent's Hospitals. Dr. Little was a very skillful operator, and in 1878 he performed a simultaneous ligation of the subclavian and carotid arteries of the right side for aneurism of the first part of the subclavian. He was a frequent contributor to medical periodical literature, and among the papers which he published were articles on median lithotomy (an operation which he is said to have performed more frequently than any other American surgeon living at the time it appeared), plaster-of-Paris dressings, puncture of the bladder by aspiration, excision of the lower jaw, and an operation for restoration of lips. A widow and two sons survive him.

Death of Dr. T. H. Wingfield.—Dr. T. H. Wingfield, a prominent physician, died at his residence, at Towson, near Baltimore, on the 30th of March.

He was about fifty-two years of age, and had been suffering from malarial trouble for some time. Dr. Wingfield was attached to General Lee's staff as surgeon during the late civil war, and was a brother of Bishop Wingfield, of California.

TWO DEATHS FROM CHOLERA.—The bark Sonntag, of Boston, arrived March 30, at Salem, Massachusetts, from Chittagong, whence she sailed November 24. On December 2, the ship's carpenter, a native of Finland, aged 22, died of cholera after an illness of five days, and on December 26, one of the crew, a Swede, of the same age, also died of cholera after 14 hours' illness. The Board of Health ordered the vessel from the wharf out into the stream.

TWO DEATHS FROM YELLOW FEVER.—The steamship, City of Para, of the Pacific Mail, which arrived at Quarantine, New York Harbor, March 24, was thoroughly fumigated and allowed to come up to the city on the following day. Two of the passengers had died of yellow fever during her voyage, and were buried at sea; but there had been no sickness on board since March 19, three days after the ship left Aspinwall.

INCREASE OF CONTAGIOUS DISEASES AND MORTALITY IN NEW YORK.—During the week ending April 4, there were reported in this city, 106 cases of scarlet fever, 207 of measles and 77 of diphtheria, a considerable increase in these diseases over the corresponding period of last year. The total number of deaths during the month of March, was 3,349, as against 2,852 during March, 1884.

AMERICAN SURGICAL ASSOCIATION.—The annual meeting of this society will be held at Washington, D. C., from the 21st to the 24th of April, and among the papers to be read are the following: The Field and Limitation of the Operative Surgery of the Human Brain, by Dr. John B. Roberts, of Philadelphia; Nephrectomy—its Indications and Contra-indications, by Dr. S. W. Gross, of Philadelphia; The Etiology of Tetanus, by Dr. P. S. Conner, of Cincinnati; Some Points in the Surgery of the Hypertrophied Prostate, by Dr. J. W. S. Gouley, of New York; Phosphorus Necrosis—its Causes, Treatment and Prevention, with Reports of Cases, by Dr. J. E. Mears, of Philadelphia; A Case of Cholecystotomy, by Dr. C. T. Parkes, of Chicago; The Immediate Cure of Fistula in Ano, by Dr. Stephen Smith, of New York; The Healing of Arteries in Man and Animals after Ligature, by Dr. J. Collins Warren, of Boston; Nephro-Lithotomy, by Dr. L. McL. Tiffany, of Baltimore; and An Experimental and Clinical Study of Air Embolism, by Dr. N. Senn, of Milwaukee.

MR. A. HALLER GROSS.—The nomination of A. Haller Gross, Esq., son of the late Prof. S. D. Gross, to be American Counsel at Athens, is considered a most admirable appointment by all to whom his high character and peculiar qualifications for the post are known.

PROFESSOR FRERICHS.—The death is announced from Berlin, of Frederick Theodore von Frerichs, the distinguished medical professor and author, in the 66th year of his age. In 1854, he was invested by the King of Prussia with the decoration of the Red Eagle and the title of Privy Councillor, as a recognition of his learning and valuable contributions to medical literature. In 1859, he received his professorship at the University of Berlin, and during the Franco-German war he acted as Physician in Chief of the German Army.

CONSCIOUSNESS AND THE NERVOUS SYSTEM, is the subject of an illustrated article in the *Popular Science Monthly* for April. The Appletons have just published a translation of the "Life and Labors of Pasteur," by his son-in-law, with an introduction by Prof. Tyndall.

CHOLERA IN SPAIN.—An epidemic of a disease which there is apparently no reason to doubt is Asiatic cholera, has broken out at Jativa, in the Province of Valencia, Spain.

A CREMATION SOCIETY AT WORCESTER, MASSACHUSETTS, was formed April 3d, by a number of gentlemen prominent in the medical profession and in business and social circles.

NEW YORK STATE MEDICAL ASSOCIATION.—The second special meeting of the Fifth District Branch, will be held in Poughkeepsie, on Tuesday, May 19th.

A NEW RECEPTION HOSPITAL.—The New York Charity Commissioners have secured possession of the old Gouverneur Market building at Gouverneur Slip, and have called for bids from contractors to alter it into a reception hospital for cases occurring below Canal street.

PROPERTY IN DEAD BODIES.—At a meeting of the Society of Medical Jurisprudence and State Medicine, held March 11, a paper was read by H. A. Riley, Esq., in which he stated that a man could sell his own body and the claim after death of the buyer would be superior to that of relatives of the deceased.

LARGE SEIZURES OF UNWHOLESOME VEAL.—On March 17th, 4,600 pounds, and on March 19th, more than ten tons (about 500 carcasses) of "bob" veal were seized by Dr. Cyrus Edson, Chief of the 2d Sanitary Division, and the meat inspectors of the New York Board of Health.

COLLEGE COMMENCEMENTS.—Rush Medical College, February 17, 151 graduates; Nashville Medical College, February 24, graduates, 59; Medical Department of the University of Nashville and Vanderbilt University, February 26, graduates, 100; Buffalo Medical College, February 24, graduates, 46; Memphis Hospital Medical College, February 25, graduates, 35; Louisville Medical College, February 26, graduates, 63; University of Louisville, March 3, graduates, 74; Missouri Medical College, March 3, graduates, 90; St. Louis Medical College, March 6, graduates, 20; St. Louis College of Physicians and Surgeons, March 7, graduates 11; Medical College of Ohio, March 5, graduates, 58; Miami Medical College, March 10, graduates, 27; College of Physicians and Surgeons, of Chicago, March 10, graduates, 60; Medical Department of Howard University, Washington, March 9, graduates, 25; Baltimore Medical College, March 12, graduates, 8; College of Physicians and Surgeons of Baltimore, March 13, graduates, 154; School of Medicine, University of Maryland, March 17, graduates, 74; Kansas City Medical College, March 17; Denver Medical College, March 26, graduates, 6. At the commencement exercises of the University of Louisville, eulogies upon the two deceased members of the Faculty, Drs. L. P. Yandell and T. S. Bell, were pronounced by Professors Octerlony and Roberts, respectively.

DEATH OF DR. F. J. CRAWFORD.—Dr. F. J. Crawford, a prominent physician of Carroll Co., Md., died at his residence on March 18, in the 67th year of his age.

MEETINGS OF STATE MEDICAL SOCIETIES.—The annual meeting of the Louisiana Society will be held at New Orleans, April 21, 22 and 23; of the Arkansas

Society at Little Rock, April 22, 23 and 24; of the Missouri Society at St. Joseph, May 12, 13 and 14; and of the Indiana Society at Indianapolis, May 12, 13 and 14.

THE ASSOCIATION OF AMERICAN MEDICAL EDITORS.—This Association will hold its next annual meeting at New Orleans, Monday evening, April 27. Dr. Henry O. Marcy, of Boston, is the President.

BRITISH MEDICAL ASSOCIATION.—The 53d annual meeting of the British Medical Association will be held at Cardiff, on July 28, 29, 30 and 31. President, James Cuming, M.D., F.K.Q. C.P., of Belfast; President-elect, W. T. Edward, M.D., F.R.C.S., of Cardiff.

WESTMINSTER HOSPITAL, LONDON.—The Duke of Westminster laid the corner-stone of the new medical school now being erected in Caxton street, Westminster, on the 28th of February.

MAINE'S BOARD OF HEALTH.—Gov. Robie has appointed the following State Board of Health: Frederick Gerrist, Portland; Lewis Barker, Bangor; Stephen J. Young, Brunswick; O. A. Horr, Lewiston: E. C. Jordan, Portland, and J. O. Webster, Augusta.

MEDICAL SOCIETY OF LONDON.—Dr. John V. Shoemaker, of Philadelphia, has been elected a Fellow of the Medical Society of London.

UNIVERSITY OF PENNSYLVANIA.—Dr. Harrison Allen has resigned the Professorship of Physiology, and Dr. E. T. Reichert been appointed Lecturer on Physiology *pro tem.*

MEDICO-CHIRURGICAL COLLEGE OF PHILADELPHIA.—Dr. Frank Woodbury has been appointed Professor of Materia Medica and Therapeutics.

UNIVERSITY OF VERMONT.—Dr. Ambrose L. Ranney has been appointed Professor of Diseases of the Nervous System, in the place of Dr. William J. Morton, resigned. He will continue his lectures on Anatomy as before.

THE NEW YORK STATE ACADEMY OF VETERINARY SCIENCE AND COMPARATIVE PATHOLOGY.—A society with this title was organized in New York, March 25, to take the place of the former State Veterinary Association.

CHICAGO MEDICAL SOCIETY.—At the annual meeting of the Chicago Medical Society, held April 7, it was decided by a vote of 28 to 18, to amend the Secretary's report giving a list of the subjects discussed during the year, by striking out the subject of "Hypnotism or Mesmerism," the title of a paper read by Dr. Charles G. Davis. It was claimed that men previously coached, and commonly known as "horses," had been hired to act as subjects by the author of the paper.

NEW YORK STATE CHARITIES AID ASSOCIATION.—Mr. Charles S. Fairchild, recently appointed Assistant Secretary of the Treasury, has resigned the presidency of this Society.

MARRIED.—Dr. W. H. Baptist, of Balzoni, Washington Co., Miss., was married to Mrs. Ella Eckford, of Pensas Parish, La., on the 19th of January last.

# EDITORIALS.

THE VALUE OF ANTIPYRIN.—It is gratifying to note that the admirable results obtained by Filehne, Guttmann, Falkenheim, and other European observers, with this agent have now been abundantly confirmed by the experience of American physicians, as indicated by the expressions of opinion, based on adequate clinical observation, which were made at a recent meeting of the New York Academy of Medicine. On this occasion Professor William H. Draper read a paper on the remedy and its effects, in which he gave an analysis of twenty cases of typhoid fever treated with it in his service at the New York Hospital. For the successful reduction of temperature without unpleasant consequences, in a wide range of diseases, it seems to be already an established fact that no means has as yet been discovered that can be ranked with antipyrin; and there can be little question that it will soon entirely supersede the use of cold baths in the treatment of such affections as typhoid fever, where there is a long-continued high temperature, in which the latter have hitherto proved of essential service. In puerperal septicæmia and the pyrexia following grave operations, whether due to septicæmia or not, it is not possible to speak with the same confidence as yet; but the experience which has thus far been had with the remedy in this class of affections, is sufficiently favorable to render it probable that here also it will supersede the application of cold to the surface as a means of reducing temperature.

In three of Dr. Draper's cases of typhoid fever a direct test was made as to the relative antipyretic effect of cold baths and antipyrin, and with results overwhelmingly in favor of the latter. In one of these it was found impossible to reduce the temperature below 104 3-10 with cold baths and we may rest assured that in an establishment occupying the position and with the facilities of the New York Hospital, that this mode of treatment was thoroughly carried out; while under the use of antipyrin it rapidly fell to 102 2-10. In the second case the baths failed to reduce the temperature below 102 4-10, but antipyrin promptly brought it down to 101 2-10. In the third case, however, the difference between the two was not so striking. Baths, while acknowledged to have been hitherto the most efficient means of controlling the high temperature of typhoid fever, have always been open to certain objections, to which it is not necessary to allude here, and especially in private practice. While, it is true, many of the objections which have been urged against them are entirely without foundation, it cannot be denied that in this country, at least, there has always existed in the popular mind a deeply-rooted prejudice against their use, and there are perhaps few physicians who have not known of one or more instances in which the medical attendant has been blamed for the death of the patient in cases where they have been resorted to. Instances are not rare in which a practitioner, conscientiously endeavoring to do his patient the utmost amount of good possible, has lost a large and influential circle of patronage because he has felt it to be his duty to employ cold baths in some case of typhoid fever where the severity of the disease or some unlooked-for complication has carried the patient off.

If, therefore, we have an agent which is not only as efficient in reducing temperature as the cold bath, but even considerably more so, there seems to be no reason why the latter should not, as a rule, be given up entirely in the treatment of febrile diseases. Antipyrin has, in addition, the advantage of allaying nervous irritability, controlling delirium, relieving hebetude and cleansing the parched and coated tongue in many cases of typhoid, as has been repeatedly observed; and hence there is all the more reason why it should be resorted to. Again, there are certain cases in which cold baths have absolutely no effect whatever on the temperature, yet in which antipyrin acts promptly and efficiently in reducing this. A very striking instance of this kind was related by Dr. Peabody at the meeting of the Academy referred to. The patient was a young woman upon whose body there was such a thick layer of adipose tissue that it seemed to prevent refrigeration of the surface from affecting in the slightest degree her internal temperature. After a thorough trial of cold baths the temperature still remained at 105, with a marked degree of mental sluggishness; but under the use of antipyrin the temperature quickly fell several degrees, and her sensorium at once cleared up.

Antipyrin, when used judiciously, appears to have no depressing effect whatever upon the heart's action, or the general condition of the system, and the only unpleasant results that are liable to be met with from it are a tendency to produce sweating in some cases and vomiting in others. When profuse diaphoresis is caused by it, the recurrence of this can be avoided if it is thought advisable by ordering ten minutes before the dose a little agaricin or atropia, as pointed out by Huchard. On the other hand, when it has the effect of causing gastric disturbances, it can be given by hypodermic injection, and Dr. Peabody has found that the drug is peculiarly adapted for this mode of administration, on account of its ready solubility, and the fact that it is not liable to produce any local irritation whatever. There are cases also in which antipyrin has but little effect when given by the mouth, and exerts its legitimate action only when used hypodermically. One instance of this kind was related by Dr. Draper; no reduction of the temperature whatever being effected until the drug was given hypodermically. In the case of children, it is often advisable, as suggested by Dr. Weber, to administer the remedy *per rectum*. On the whole, therefore, there seems to be but little doubt that in antipyrin we have a most valuable acquisition to our therapeutic resources, and that in conditions where the danger or suffering present is due purely to a high degree of temperature, it is in all probability by far the most satisfactory agent that has as yet been discovered.

THE ACTION OF ELECTRICITY IN RESPIRATORY AND CARDIAC FAILURE.—The excellent paper on electricity as a stimulant in the above conditions, read by Dr. Gaspar Griswold before the New York Academy of Medicine in February, and now just published, gives expression to a timely note of warning which is undoubtedly needed to a considerable extent in the profession. Among his conclusions are the following: That electricity cannot be applied clinically in such a way as to stimulate the heart, literally speaking; that the application of one pole in the neck and the other over the præcordial space directs the current to the pneumogastric nerve, and retards the heart, instead of stimulating it, while a strong current applied in this way may stop the heart and kill the patient instantly (instance cited); and that an electric current applied over the phrenic nerve necessarily stimulates the pneumogastric at the same time, so that this measure always threatens as much in the way of cardiac depression as it promises in the way of respiratory stimulation. The final conclusion, and the special point which the paper was written to emphasize is, that under no circumstances should a current strong enough to contract muscles elsewhere in the body be suddenly or incautiously applied over the phrenic or pneumogastric, or anywhere in the neck. He found by a series of experiments on dogs that the liability of the heart to be stopped by pneumogastric stimulation is not increased in aconite, ether, or opium poisoning, on account of the paralysis of the pneumogastric produced by these drugs, and concludes that it is, therefore, permissible to cautiously apply electricity over the phrenic nerve in these conditions. Great caution is necessary, however; for the case which he mentions in which instant death was produced by the sudden application of a current to the neck was one of opium poisoning, the pneumogastric paralysis not being complete at the time. His experiments show that in heart failure from chloroform, and when morphia has been injected into a vein, the heart may be stopped by even a slight current applied to the pneumogastric, and that any application of electricity over the phrenic is strongly contra-indicated under these conditions. While, as was pointed out by one of the speakers in the discussion which followed the reading of Dr. Griswold's paper, deductions in such a matter derived from experiments on animals may not be entirely trustworthy as regards the human subject, the results of the experiments are sufficiently uniform and striking, especially when enforced by the fatal case in man to which allusion has been made, to render a very considerable amount of caution necessary in making such applications of the electric current. There can be no doubt, whatever, that in the great majority of cases of narcotic poisoning or other sudden failure of the vital powers, the chances are that, owing to the pressing circumstances of the emergency, the electricity will by no means be applied in the most efficient or judicious manner. The general mass of practitioners are far too apt to employ this powerful, and, in reality, dangerous agent in a reckless manner ; and the reason that accidents do not more frequently occur is probably due to the fact that batteries thus suddenly called into requisition are not, as a rule, in good working order. As it is, it is quite possible that in a certain proportion of cases of poisoning in which electricity is used, and yet which end fatally, recovery might finally have resulted had this agent not been applied to the neck or over the præcordial region. Dr. Griswold in his paper refers, indeed, to two cases in which it was used in this way, one in Philadelphia and the other in London ; in one of which the patient died and in the other of which he attributes the recovery to the fact that the battery, a very powerful one, was probably out of order. Even in most of the cases of opium poisoning it would seem to be safer and more efficacious to confine the use of electricity to the general stimulation of the muscles by a succession of quick applications to various points of the surface. Applied in this manner it is decidedly preferable to the ordinary practice of flagellation ; while at the same time it acts as an excitant to the respiratory muscles, and thus constitutes an efficient auxiliary to artificial respiration, which can always be employed without danger of doing any harm, and which should in all cases be systematically and persistently resorted to. As both Drs. Jacobi and Amidon maintained at the Academy meeting, in a great many of these cases the cardiac failure is secondary to the respiratory. These remarks, it is to be understood, are not meant to apply in the slightest degree to the employment by experts of strong electrical currents for the galvanization of the neck in the treatment of exophthalmic goitre and other affections.

The Sanitary Council of the Mississippi Valley.—The *Journal of the American Medical Association* gives a full report of the proceedings of the Council which met in New Orleans on the 10th and 11th of March, and a brief notice of which was given in the last number of the Journal. In his address of welcome Dr. Joseph Holt, President of the Louisiana State Board of Health, maintained that the interior States of this continent have a natural right in every question touching the navigation of the Mississippi, from its headwaters to the Gulf, and that, occupying the delta of the Mississippi, and, therefore, exceptionally exposed, it was neither equitable nor proper that Louisiana should bear the entire brunt of expenditure in fending from her shores an invading fleet or an invading pestilence. As other parts of the country enjoyed the benefits of the successful repulsion of such invasions, it was only fair that all concerned should alike contribute their own proportion of the expense. It followed, therefore, that the Council had a right to call upon the National Government to set aside as an emergency fund an ample appropriation of money to be used in warring against the common enemies, yellow fever and cholera.

The annual report of the Secretary was largely devoted to the consideration of the measures to be enforced in case of the appearance of cholera at any point in the Mississippi Valley, such as a prompt notification of the outbreak, the local treatment of the outbreak, and supervision of travel from the infected points. In regard to the possible advent of yellow fever, he said that what could be done had been already demonstrated, and the prospect of successfully dealing with this subject in the future was certainly as encouraging now as at any previous time. The report of the committee appointed, with Dr. Kedzie as chairman, to formulate a system of co-operation of the States represented in the Council to prevent the introduction of yellow fever or cholera into the Mississippi Valley, and also a plan of co-operation should either of these once gain admission to the Valley, was adopted with the unanimous approval of the delegates. Before the meeting adjourned the Presidents of the various State Boards of Health represented gave successively an account of the sanitary condition of their respective jurisdictions, and the following officers were elected for the ensuing year: Dr. Pinckney Thompson, of Henderson, Kentucky, President; Dr. Joseph Holt, of Louisiana, Vice-President; Dr. J. H. Rauch, of Illinois, Secretary; Dr. W. H. Watkins, of New Orleans, Assistant-Secretary.

Such representative gatherings from time to time for the discussion of sanitary questions, and the adoption of needed concerted sanitary measures, ought unquestionably to result in great benefit to the entire country.

A Pitiable Story.—Before United States Commissioner White, at Cincinnati, a very sad case, if the newspaper reports are to be believed, was developed on the 15th of March, when Dr. T. H. Bingham, of Linndale, who was under arrest on a charge of passing counterfeit nickels, made the following statement to the court: "I am guilty of the offense charged, but was forced to do it to keep my wife and child from starving. I am a graduate of an Eastern medical college, and came to Linndale from Massachusetts about a year ago. I picked up some practice, but during the winter I had almost nothing to do. My means were exhausted and I could not beg. My child became ill from lack of nourishment, and I saw my wife failing day by day. In a moment of desperation I thought I would make a few nickels, and with them purchase food. I found some lead in the house and borrowed a nickel for a pattern. I made 40 of them. They were so crude that I knew they would be detected, and so for several days I kept them in the house, not daring to try and pass them. One day my wife felt ill and asked for food. I picked out three of the nickels that were made the best and hurried to a butcher's shop in the village and asked for 15 cents' worth of meat. It was handed to me and I threw down the counterfeit nickels and ran home. I gave the meat to my wife and child. About an hour after a man called and said that he had been sent to me by the butcher, who had discovered that the money was spurious. If I would redeem the worthless money nothing would be done. I told him that I had not one penny in the world, and laughed when he talked about my redeeming them. Some time after an officer came and took me into custody." There was hardly a dry eye in the court when the accused ceased, and the Judge was visibly affected. He said that he would be compelled to bind the prisoner over, and did so, in the sum of $100, the lowest bail possible. Will not some of our readers who may have the opportunity investigate this case, and if the facts are found actually to be as here stated, endeavor to extend a helping hand to this unfortunate professional brother?

The Insane Department of the Philadelphia Hospital..—Although purchased at a very dear rate, a number of much needed reforms are likely to result from the disastrous fire that occurred at Blockley in February, not only in the management of the insane department, but in the case of the entire number of paupers, whether suffering from disease or not, under the charge of the city authorities. It has been definitely decided to remove the almshouse to a distance from the centre of the city, a thing that should have been done years ago; but whether the city fathers can be induced to tear down the present wretched hospital buildings, and put up new and suitable ones in their stead, remains to be seen. The *Boston Medical and Surgical Journal* is undoubtedly mistaken in supposing that any number of the insane patients were confined with chains at the time of the fire. The newspaper reports to that effect seem to have originated in the fact that one of the victims, John Herriges, *before* his admission to the institution, in 1870, had been kept in chains by his parents for 20 years, and that another, James Burk, had to be secured for the protection of his fellow inmates. During the 22 years that this man was in the institution he is said to have killed no less than three of the inmates, and on account of this uncontrollable homicidal mania it was necessary to confine his hands, which was done, not with chains, but by means of leather wristlets attached to a belt. He was always an object of great interest to visitors, and will probably be remembered by such of our readers as have been internes at the Philadelphia Hospital or studied medicine at one of the Philadelphia schools during the past 20 years. Dr. Richardson, the medical superintendent, is known to be a gentlemen of ability and intelligence, but he has always been hampered in the enlightened management of the institution by the niggardly and stupid policy pursued by the authorities governing its affairs. On the 18th of March one inmate of the Essex County Asylum for the Insane, in Newark, N. J., killed another by fracturing his skull with a spittoon, and when the physician in charge, who made the statement in reference to the case that he was not responsible for having loose spittoons in the wards, was asked: "Are you not the head of this institution?" he replied: "Yes, nominally, but the Board of Freeholders are the actual rulers of the asylum." This, it is to be apprehended, is the actual condition of affairs in a great many such institutions.

THE ANNUAL MEETING OF THE TEXAS STATE MEDICAL ASSOCIATION.—It is respectfully suggested to our friend and neighbor, the *Record*, that it should secure the services of an office cat, after the manner of the New York *Sun*. In its issue of April 4th it states that the seventeenth annual meeting of the Texas Society will commence on "Sunday, April 21st," and then makes a little preachment on the enormity of introducing the "European and unchristian practice of holding medical conventions on Sunday." That it is distinctly in need of such a mentor as the remarkable cat of the *Sun* seems to be sufficiently evident from the fact that a reference to the calender for the Year of Grace 1885 will show that the 21st of April does not come on Sunday, and also from the consideration that it is expressly specified in the by-laws of the Texas Society that its annual meetings shall always commence on the third *Tuesday* of April. In case the *Record* is in want of an almanac, it is probable that the estate of either the late Dr. Jayne or the late Dr. Ayre will be happy to supply it with one in the form of a neatly-printed volume, beautifully illustrated with graphic representations of the thoracic and abdominal visceræ, to say nothing of boa constrictor-like tapeworms dislodged from the intestinal tracts of grateful patients by the action of the infallible remedies described in the work.

In January last Dr. H. C. Ghent, the President, issued the accustomed circular, required by the by-laws of the Texas Society, to notify the Profession of the State of the meeting and urge attendance at it, and in it he makes an eloquent appeal to his medical brethren who do not belong to any organization, to join the Society and unite in making the volume of the transactions for 1885 more valuable from a scientific point of view than any of its predecessors, and at the same time in securing at as early a date as practicable the passage of a State law restricting the present unlimited license o: quacks and charlatans.

THE SIX DAYS' ROLLER SKATING MATCH.—In the match at Madison Square Garden which terminated on the 7th of March, the winner accomplished the remarkable feat of skating 1,090 miles in six days; which is undoubtedly the greatest distance ever traveled in the same time by a human being dependent entirely on leg-propulsion. Ten days after the match, however, one of the contestants died from the results of the tremendous physical strain to which he was subjected; which certainly illustrates in a very forcible manner the wretched folly of such long-continued tests of endurance. Probably not one man in ten thousand can engage in a six days' walking or skating match without doing permanent injury to his constitution, and appreciably lessenning his chances of long life.

Just after the above had been written, intelligence was received of the death of Donovan, the winner of the skating match, from causes which were attributed by his medical attendant, at least indirectly, to the effects of the exhaustion, produced by his efforts to secure the championship. Is it not time that such protracted contests should be put a stop to by law?

A RARE TREAT IN STORE FOR THE PROFESSION.—Dr. Edward Warren-Bey will soon publish his autobiography. As his life has been one of great variety and interest, of exciting adventure and unusual experience, so will his book be rich in material and specially valuable to the medical profession. Dr. Warren-Bey has been greatly honored abroad in more than one country, and his record has been such as to render the Profession of America justly proud of him.

DR. EDMOND SOUCHON, of New Orleans, has been called to the Chair of Anatomy and Clinical Surgery in the Tulane University of Louisiana, vice Dr. Samuel Logan resigned. Dr. Souchon is an Alumnus of the University, and while pursuing his studies in Paris became the assistant and interpreter of the late Dr. J. Marion Sims. He also made the dissections and drawings for illustrating Sims' book on Uterine Surgery. For several years after his return to New Orleans he served as Demonstrator of Anatomy in the University and Surgeon to the Charity Hospital. His talents, studies and industry eminently qualify him for the position to which he has been called in the great medical school of the South.

GOOD THINGS TO COME.—Among the original articles in the May number of the JOURNAL will be the following: "Æsculapia as Revealed by Inscriptions," by Augustus G. Merriam, Adjunct Professor of the Greek Language and Literature in Columbia College, a paper forming the basis of the Professor's recent lecture on the Temples of Æsculapius, delivered by special invitation before the New York Academy of Medicine; "The Treatment of Exophthalmic Goitre," by Dr. A. D. Rockwell, of New York; "Kidney Colic and Renal Calculi," by Dr. W. H. Taylor, of Washington, and "Trichina Spiralis," by Dr. Archer Atkinson, of Baltimore.

CORRECTION.—In Dr. Cook's article in the March number the word *tablespoonful*, in the 5th line from the bottom on page 259, should read *teaspoonful*. In the 20th line from the top of page 260, the word *now* should read *not*, and in the 35th line of the same page *had established* should read *had been established.*

TO OUR CONTRIBUTORS AND EXCHANGES.—All communications to the editor, as well as all exchanges and books for reviews, should be addressed to 22 West Thirty-first street, New York. Business letters should be sent to the publishers' address, P. O. Box 1124.

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VOL. XL. NEW YORK, MAY, 1885. No. 5.

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## ORIGINAL ARTICLES.

### ARTICLE I.—ÆSCULAPIA AS REVEALED BY INSCRIPTIONS.* By Augustus C. Merriam, A. M., Ph. D., Adjunct Professor of the Greek Language and Literature in Columbia College, New York.

The literature that has descended to us in the Greek tongue is indeed voluminous, but there are many chapters of Hellenic life which are totally lacking in these sources, or are touched upon only in passing allusions, which pique rather than satisfy our desire for a better knowledge. Among these must be placed the temples of Æsculapius, their priestly polity, priestly practices, and the treatment of patients within their precincts. Much has been written in modern days, in histories of medicine and similar treatises, upon this subject, and, as usual where the facts are few, imagination and inference have been largely drawn upon with varying results, in attempting to weave a connected whole out of the scattered notices. It is one of the glories of the ancient Greeks that they were able to live a life so fruitful that every memorial of it, however meager, proves of intense interest to us at a distance of twenty centuries. The fascination which gathers about the beginning of things rests like a brilliant aureole upon their land, and continually incites generation after generation of scholars to inquire and gather, and never rest while a grain is still to be gleaned. One mine of information which lay almost neglected a century, nay even fifty years ago, is now yielding rich results. The spade is returning to the light of day countless treasures which mother earth has been gently clasping within her bosom through all the centuries, and keeping for those who will. Fortunately for us, the day of the fragile newspaper is recent. Greece inscribed her records on stone or metal, and though these descend to us far too often in a sadly mutilated form, they still offer materials richly varied, and priceless in their capacity to supplement our literary sources, and especially to open vistas into the very hearts of the people, disclosing the hopes and fears, the faith, the practices and habits of the times. The zeal with which excavations have been pursued within the past decade has been productive of corresponding acquisitions in numberless subjects, and medicine in its historic aspect has not lacked her share. In Greece the greater part of the excavations are conducted by the Archæological Society of Athens, and it is to their labors that we owe the results which will be embodied below, and which have accrued from laying bare the sites of the temple of Æsculapius at Athens, and the still more famous one at Epidaurus.

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* Recast from a paper read before the New York Academy of Medicine, March 19, 1885.

Of the temple at Athens, we have mention in the Plutus of Aristophanes* where the cure of the blind god of wealth is described; in the Memorabilia† where Xenophon speaks of its warm spring, and by Theophrastus,‡ in his Characters, while portraying the zeal of a man who had dedicated a bronze ring in the temple and went every day to keep it bright with garlands and to anoint it. Æschines,§ in his speech against Ctesiphon, charges Demosthenes with summoning an assembly of the people on the sacred day, in the spring month, when the sacrifice and religious ceremonies were to be performed in honor of Æsculapius, a proceeding, he says, on the part of his opponent, which no one remembers ever to have had a precedent. Pausanias|| enumerates the temple among the most famous scions of Epidaurus, and declares that it is worth seeing for the statues of the god and his children, and for its paintings. Both Plutarch** and Ælian†† relate the story of the thief who succeeded in entering the temple during the night and carrying off a number of

* Aristoph. Plut. 620-747.

† Xen. Mem. iii. 13, 3.

‡ Theophrast. Char. xxi. (5.)

§ Æschin. Ctes. 67.

|| Paus. ii. 26. 8; i. 21, 4.

** Plut. de Solert. An. 13.

†† Æl. Hist. Nat. vii. 13.

the gold and silver offerings, without detection by the temple servitors, who were less watchful than a dog that followed the thief persistently, barking and attracting the attention of the passers, till the objects were missed, and the thief was arrested with the dog still at his heels.

Finally, in his life of Proclus, the philosopher of the 5th century, A. D., Marinus* relates that this commentator of Plato was a frequenter of the temple, and on one occasion, when a friend had a daughter so ill that the physicians had given her up, her father went to Proclus and begged him to go to the temple and intercede with the god for the daughter's recovery. His prayers were so efficacious that the maiden began to mend at once, and recovered. It is supposed† that soon after this, about 500 A. D., the temple was destroyed by the Christians, and they built a church amid its ruins.

The sanctuary was ensconced close beneath the Acropolis, on the south side, between the great theatre on the east, and other structures on the west. Here, sheltered from the north winds, which are very severe in winter, and lying under the sun all day, it was happily situated, with a magnificent panorama in the distance towards the Peloponnesus south. Excavations were begun on this site in 1876, and continued more than a year, laying bare the substructions of two temples, and the adjacent buildings for the priests and the suppliants. The western temple was the older,‡ to judge from the foundation walls, which were of Piraean stone, attesting a good epoch of Greek work; and was also the smaller, 16x13 feet. The eastern temple was 30x14 feet. Adjacent to it was a portico nearly 100 feet long, the dormitory for the patients, and its remains bear witness to its erection in the 4th century B. C. Another, 90x41 feet, near the older temple, must have been built nearly two centuries later. Many inscriptions were discovered upon the site, and they give us the most complete knowledge of the priestly polity and the position of the cult in the religion of the state, to be obtained from any source, as well as many particulars in relation to the buildings, their contents and practices. One of these§ informs us that the priest, who had just been elected for the coming year, appeared before the Senate, and reported that the ancient temple and some of the other structures needed repairing, and he offered to do it at his own expense. His request was granted, and he was allowed to record the fact with his own name on the parts reconstructed. This inscription belongs to the latter part of the last century before our era. Soon after,‖ B. C. 5, another priest is less liberal. His building is paid for "out of the revenues of the god." The precinct was of considerable size, enclosed by a wall, and was adorned not only with temples and porticos, but other buildings, with statues, and offerings of every kind. In the temple proper would be kept the offerings in precious metals, on tables, shelves, the walls, and even suspended from the ceiling.** The marbles with inscriptions, bas-reliefs, etc., were disposed mainly in the other buildings, on exterior walls and about the precinct. Twice mentioned within the sanctuary is a statue of Polycritus,* who has been reasonably supposed to be the celebrated physician of Mende in the time of Conon. Besides the pictures alluded to by Pausanias, the temple contained the statue of the god, with a bed near by, on which the statue was laid during festal occasions, a table for the repast of the god, and an altar. We have several fragmentary inventories of the other objects, one† that extends to considerable length and is fairly complete as far as it goes. It is probable that this was not a complete inventory of all the objects, such as has been found in Delos of the Apollonian temple there;‡ it belongs rather to another class, of which we have examples from the sanctuary of the "Hero Physician,"§ another healing deity at Athens, and from the temple of Amphiaraus at Oropus,|| where numerous cures were believed to be effected. The occasion for such records was this. At times the temples would become embarrassed by the number of offerings in precious metals, and it would be convenient to melt them down and manufacture something to be of use in the service of the god. As the preamble of our inscription is so mutilated that only an occasional word can be recovered, the mode of procedure is learned in the main from that of the "Hero Physician." The priest appeared before the Senate, reported the necessity and recommended the appointment of a commission, in our case of ten, five Areopagites and five from the citizens, who in conjunction with the strategos and priest, were to discharge the duty. These were appointed, and proceeded to select the objects to be used, and three pieces of furniture were manufactured—a table, a censer and a sacrificial plate or basket. The articles employed were extremely numerous, and consisted mainly of representations of parts of the body in which the ailment was centered; as the face, eyes, mouth, nose, teeth, ears, neck, breasts, hands, fingers, knees, privates both male and female, hips, breast, heart, and even the whole body. Pieces of money are also common, cups of all kinds, and a number of large vessels which had been manufactured under similar circumstances during the office of earlier priests. All of these objects, except the few that were uninscribed, were entered upon the list with the name of the donor, its description, weight, or value, and sometimes the priest under whom it was consecrated; and this list was inscribed on one tablet set up in the temple itself and another in the Metroum in another part of the city. Hence these tablets contained a full record of each piece broken up, and an account of its disposition, that it might never perish wholly from sight, but the guerison of the god be ever remembered and carefully treasured. At the conclusion of its labors the commission was discharged with the thanks of the Senate. This inscription falls about 270 B. C. A second** of nearly of the same length is a proper inventory of the temple belongings, and describes the objects by their position on the right or left, behind the door, "to the right of the god," etc. This belongs somewhere within the

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* Marin. Vit. Procl. xxix. † Koehler, Mittheil. des deutsch. Archæolog. Instit. Athen. II. p. 259.

‡ L' Asclépieion d' Athènes d' après de récentes découvertes, P. Girard, Thorin, 1881, a work from which considerable assistance has been derived.

§ Kumanudes, Athenaion, v. p. 104; Corpus Inscriptionum Atticarum, ii. 489 b; Dittenberger, Sylloge Inscrip. Graec. 356. ‖ Athenaion, v. p. 419. ** C. I. A. ii. 766, 835, 836.

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* C. I. A. ii. 766.

† C. I. A. ii. 836; cf. 405 b.

‡ Bulletin de Corr. Hellén. vi. 1882, p. 29; Ditt. S. I. G. 367.

§ C. I. A. ii. 403.

|| Anc. Gr. Inscr. Brit. Mus. ii. 160.

** C. I. A. ii. 835.

years 320-317 B. C. A shorter one[*] arranges the offerings according to years, covering 340-39-38 B. C., with from twenty to thirty consecrations, each year. These numbers must have varied greatly, however, from various causes, especially the prevalence of local maladies, among which the most frequent was a trouble with the eyes, that is still very common in the Greek world.

From modest beginnings of a single small temple, but with a dormitory attached as early as Aristophanes, a gradual growth went on, as may be seen from the earliest inscriptions in the 4th century B. C. up to the latest in the 3d A. D., and instead of there having existed a profound repugnance to it, as some have imagined, the cult became one of the most popular in Greece and maintained its ground among the latest. Three hundred and twenty Æsculapia at least are known to have existed in antiquity, so that every town of importance must have had its sanctuary. The buildings increase in size, number, and splendor, keeping pace with the exaltation of the fame of the sanctuary and its importance in the religious observances of the state. Commensurate with this was the augmentation in the dignity of the priest and servitors of the temple. Aristophanes describes the priest as eager to gather all the cakes and figs left about the tables and altars, for his own use; and the single servitor mentioned is engaged in extinguishing the lights, though there might have been others. In the inscriptions the priest appears as an important personage in the state.[†] He has to see to it that the proper sacrifices for the safety and health of the Senate and Demos, their wives and children, be performed according to the laws and decrees, that the temple be richly decorated at festivals, that the bed for the statues of Æsculapius and Hygieia be munificently furnished, that the table for the sacred repast be handsomely garnished, and that the sacred vigil, or service lasting the night through, be conducted with all pomp and circumstance, and especially the festival which was connected with the Eleusinian Mysteries, in which a grand procession was conducted to the temple and service performed by the people in a body. The manner in which these duties were discharged was reported to the Senate and the people, and the priest was publicly thanked, a crown decreed him, and the inscribed decree erected in the sanctuary. One inscription[‡] speaks of his offering sacrifice on behalf of the state to the god in Epidaurus, and another [§] notes that he had charge of the allotment of jurymen to the several courts, probably in his civil capacity, as thesmothete or one of the Archons of the year, because as priest he was still a citizen. In this case he is not only thanked by the Senate and people, but a special decree in his praise is passed by his tribe and erected in the Æsculapium and in the Heroum of the tribe. Except in the case of a near relative of the orator Demosthenes, who was appointed priest by an oracle from Delphi,[||] all priests during the 4th, 3d, 2d, and 1st centuries B. C. were selected by lot annually.[**] But about the beginning of our era, the worship of the emperor Augustus, here[††] as at Cos,[‡‡] and probably at Epidaurus,* was united with that of Æsculapius and Hygieia in the same temple, and it is probable that then the tenure of the priesthood was changed; at all events, about forty years later we find mention of a priest for life,† as also in the 2d and perhaps 3d century A. D. The valuables of the temple, whether offerings or otherwise, were under his charge, and he was held responsible to the state for their safe-keeping, as shown by the inventories, and the care with which each object was described, and the occasional notices of the fact that one has been injured or some portion been lost. In this, as in many other particulars, the Æsculapium stood on the same footing as the other temples. Like the other priests, he had a conspicuous seat appropriated for his use in the great theatre, and his title has been found inscribed upon it.‡

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[*] C. I. A. 766.

[†] C. I. A. ii. 373 b, 453 b, 453 c, 477 b, 477 c.

[‡] Athenaion, vi. p. 137.

[§] C. I. A. ii. 567 b.

[||] Ditt. S. I. G. 368, C. I. G. 459.

[**] C. I. A. ii. 489 b, Ditt. S. I. G. 356.

[††] Athenaion, vi. p. 146, C. I. A. iii. 68a.

[‡‡] Bullet. Corr. Hellén. 1881, p. 468.

The other officers of the sanctuary were the Zacoros, the Cleiduchos and the Pyrphoros. Of these, the first became a veritable functionary in Roman times, nearly equal in dignity to the priest, and his name served to date the offerings.§ He consecrated ex votos to the god, composed hymns in his honor, and repaired the temple at his own expense.|| The Areopagus and Senate, in two instances at least, erect statues in his honor in the sanctuary. His tenure of office in one inscription is for a year. Of his specific duties at Athens we obtain no information, but elsewhere he is known to have special charge of invalids, to give them advice in the interpretation of their dreams, perform operations, and administer remedies prescribed by the god. Twice at Athens he is said to be a physican, as the priest is denominated at least once. It is improbable that the latter was always a physician. While he was elected by lot annually the chances would be widely against it, and as the names we have do not appear to recur by a second choice, while in one case the priest is archon the same year, we may be said to reach nearly a certainty. In fact, it must be remembered that the Æsculapia were not hospitals proper, where the invalid came to put himself under the care of skilful physicians, but temples, in which human skill was regarded as unavailing, and the suppliant appealed in good faith to the divinity whom he believed to have the power and will to work a miracle in his behalf, in case he could win the god's favor. This belief was firmly rooted in the hearts of the Greek race, as a whole, and was fondly cherished by the large majority from the days of Homer to the downfall of the pagan faith. It was the foundation of their religious observances, the occasion of their pomps and festivals. Public hospitals there were at Athens, with their physicians supported by the state, to which the poor could resort at any time for human aid without cost. Other physicians there were without stint in private practice for those who could pay the fee. But when, like Æschines, the great opponent of Demosthenes, as he tells us of himself in a stanza that has descended to us,** they despaired of human aid, then they turned to the more powerful physician, the patrial divinity of physicians themselves, Æsculapius, to

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* Athenaion, x. p. 528.

† C. I. A. iii. 132.

‡ C. I. A. iii. 287.

§ C. I. A. iii. 181 c.

|| C. I. A. iii. 68 e.

** Brunck, Analec. i. p.176.

whom the practitioners attributed the foundation of their art, and to whom they themselves sacrificed for help and guidance. An inscription relates that, "It is a patrial custom for all state physicians to sacrifice twice every year in the Æsculapium, to Æsculapius and Hygieia, in behalf of themselves and the persons they have cured." *

With such beliefs the suppliant must approach the deity with pure hands and pure heart, with ablution, sacrifice, prayer, incense and song. All may not hope to find the god propitious. He is expected either to appear to them in a dream and heal them outright, or to indicate by dreams the remedies adapted to their cure.† To the wicked he will not appear at all, or if he does, he is likely to punish, not to heal, as will be seen below, and in the case of Neoclides in the Plutus of Aristophanes. During the day, preparation is made for the night's sleep, and the hoped for epiphany or dream. In the Plutus the blind suppliant is first bathed in the sea, as the most efficacious means of purification. Then he is led to the temple, where they offer a sacrifice of cakes burned on the altar, together with incense, no doubt with prayers and other offerings. Elsewhere we hear of fastings enjoined. Among the objects discovered in the excavations on the site at Athens was a number of ex votos depicting in bas-relief the scenes of suppliance and adoration. In the most of them ‡ the god appears seated on a throne with Hygieia standing beside him in various attitudes, sometimes with her hands held out in benediction over the suppliant. In one, an altar stands before them, upon which are cakes, figs and other objects, with a flame rising from the center. Beside it stands a youth holding a ram for sacrifice, and behind him appears a number of suppliants with right hand raised in adoration. The sculpture belongs to the 4th century B. C., and is an excellent specimen of mediocre art, with great truth to nature. We seem to see the very scene before us. By all these ceremonies, by the incense, by the lights, by the hymns, the imagination of the invalid is powerfully excited as evening draws on, and when the word is given they all lie down to rest in hope and fear. Each comes provided with his mattress or blanket for the night, and attendants sleep beside the patient, for the dream may come to them, as well as to the patient himself. Indeed, if the patient was too ill to come in person, some relative or representative might present himself in his stead, as Proclus for the sick girl mentioned above. Several of the inscriptions § at Athens note that the offering is made in behalf of children by parents, or other relations; and one at Rome || is presented by a physician, for his patient. One of the bas-reliefs seems to exhibit a scene in a sick-room, with the patient on his bed, attended by his physician, while the god stretches out his hand in benediction and promise above him, perhaps to portray some dream on the sick-bed, like that of the Cypriote friend of Aristotle mentioned by Cicero.** Aristides, the famous orator of the 2d century of our era, who for 13 years of illness was guided, as he says in his six orations on the subject,* almost continuously by the god, was visited by his dreams at home as well as in the temples at Smyrna and Pergamus, and at times they came to his attendants or physicians, the zacori of the temple, or even strangers. The unexampled attention paid to dreams in antiquity is well-known, and is fitly illustrated by the Hippocratic treatise on Dreams,† in which a series of rules is laid down by which the physician is to be guided in prognosticating maladies foreboded by dreams, and the proper remedies are prescribed. It appears from Aristides that these or similar rules were occasionally employed in the interpretation of the temple visions. Many inscriptions ‡ declare that they were offered in obedience to a dream, or as bidden by the god, both at Athens and Epidaurus. One § at Athens reads, "The Senate, at the command of the god, erect a bust of Sosicles who was cured by Æsculapius and Hygieia." If the vision did not come at once, or if the remedies prescribed by it did not prove efficacious, the patient remained, according to the extent of his faith or the benefit accruing. Æschines relates || that he was three months in attendance at some Æsculapium before he was cured of an ulcer. One point that recommends the temple of Æsculapius strongly to the impecunious Chremylus in the Plutus, is the fact that it will cost him nothing to take his patient there, except what is necessary for the sacrifice. This seems to have been pretty generally the case. If the patient staid on, of course he would have to maintain himself, and pay such fees for attendance as he might anywhere. But the guerdon for cure went to the god, in the shape of some offering, of greater or less value according the means of the individual. This, as will be seen below, was expected to be paid within a year, and was usually inscribed at least with the name of the donor and the priest under whom it was consecrated. The objects were extremely varied, from costly utensils or pieces of art, to terra cotta images. At Athens among the donors' names those of women appear most frequently, and almost all are natives of Attica, as far as appears, though a few from beyond seas occur. No famous names have been discovered among the consecrations, but the offerings of the Demos are not uncommon, as also of the Senate. The physician of Mende mentioned above probably had a statue there, and also the orator Demosthenes; while the Senate honored other citizens with this distinction, especially a certain Rhodian physician named Pheidias who had bestowed his services gratis upon the people at Athens, 304 B. C.** A mutilation of the stela†† deprives us of the knowledge of the object consecrated by a physician Nichomachus. but it was worth 20 drachmas. The catheter is elsewhere mentioned,‡‡ and a bas-relief represents a case of surgical instruments. From all this it will be seen that the asserted antagonism between physicians and the priests and temples had little if any exist-

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* C. I. A. ii. 352 b. † Even Galen acknowledges that minutely detailed courses of treatment have thus been prescribed by Æsculapius (de San. Tuend. I, Kühn, vi. p. 41), and patients have been cured by him (Kühn, vi. p. 869). ‡ Bullet. Corr. Hellén. 1878, 1881, Mittheilungen deutsch. Inst. II., Girard, L'Asclépieion. § Athenaion, vi. p. 279 seq. || C. I. G. 5983. ** Cic. de Div. i. 25, 53, quoting Aristotle.

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* Aristid. Orat. Sacr. Dindorf, i. pp. 445-551.

† Littré. Hippocr. vi. pp. 640-663.

‡ Athenaion, v. pp. 323-340, etc., Ephemeris Archaiologike, 1883, pp. 31, 147, 150, 151.

§ Athenaion, vi. p. 371.

|| Brunck, Analecta, i. p. 176.

** C. I. A. ii. 256 b.

†† C. I. A. ii. 836.

‡‡ C. I. A. ii. 835.

ence, at least in Athens; on the contrary they appear here in harmony.* In fact the picture is quite a different one, as actually shown by the monuments, from that frequently sketched by vivid imaginations starting from a standpoint twenty centuries too late. What then were the revenues of the temples and the priests? Apparently no fees from suppliants to any extent,† and certainly not the offerings, which belonged to the god, and were sacredly guarded, inventoried, and handed down from generation to generation. Like the other sanctuaries, the temples of Æsculapius undoubtedly had lands appropriated to their use, which were let out, and brought in considerable returns. When the relative of Demosthenes was made priest by the oracle, his house and garden were also consecrated to the god, and became part of the property of the temple. Bequests also might have been made, as to churches and hospitals at the present time; and no doubt the state granted lands, as in other cases which we know. Many temples were possessed of large sums of ready money, which they loaned at a round interest to cities and individuals.‡ Usually a definite part of every victim sacrificed went to the priest. In many places this included the hide, but at Athens the hide-money went into the state chest. At the Æsculapian festival of the year 334 B. C.§ this amounted to 291 drachmas; in 333, to over 200; in 332, to 1,000. For the following year there are two entries, but the numbers are destroyed. At Cos a monthly sacrifice was offered by public officers of the state to Æsculapius and Hygieia, and the price of the victims was above 100 drachmas.||

An inscription, probably from Chalcedon,** opposite Byzantium on the Bosporus, gives an account of the sale of the priesthood, with the regulations decreed by the state, about 200 B. C. Such sales are known elsewhere in the case of other cults. The purchaser shall have certain privileges, some of which cannot be made out by reason of the mutilation of the stone, but he shall wear a crown at festivals, go to public banquets, and use any public ground about the sanctuary, if the city does not build upon it. He must be sound and possessed of all the members of his body, and be eligible to any of the city magistracies and other civic honors. A father may purchase for his son, but for no one else but himself. If any one institute any proceedings whatsoever to deprive the pur-

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* Daremberg has done good service in showing that the advance in medicine before Hippocrates was not altogether due to temple practice, but he errs on the other side in declaring that the Asclepiads were all laics, and had no connection with the temples as priests. It is more commonly supposed that the family of Hippocrates held the priesthood at Cos in their hands, and this on general grounds accords with what is known on the subject. Besides, in the Hippocratic letters, which, though later than Hippocrates, are early enough to embody trustworthy notices of customs, we find him engaged in celebrating the annual festival of the "assumption of the staff" with processions and shows, as belongs to all connected with the family (Littré, ix, p. 326). This would naturally refer to the festival of Æsculapius, and when the language is compared with that of an inscription at Cos (Bullet. Corr. Hellén. 1881, p. 213), the probability is greatly strengthened. But we now have positive proof of the connection of the family of Asclepiads with the priesthood, at least in later times. A certain Xenophon, who attained the distinction of serving as chief physician to the Emperor Claudius, was an Asclepiad of Cos by lineal descent, according to Tacitus (Ann. xii. 61), and a Coan inscription denominates him at the same time priest of Æsculapius and Hygieia for life (Bull. Corr. Hellén. 1881, p. 468).

† See, however, Luc. Alex. 19.

‡ C. I. A. ii. 814.

§ C. I. A. ii. 741.

|| Bullet. Corr. Hellén. 1881, p. 221.

** Ditt. S. I. G. 369.

chaser of his office, he shall be subject to a fine of a thousand drachmas to Æsculapius. The purchaser shall pay half the purchase money in January, and the rest in February. When all is paid he shall be consecrated in his office at his own expense. He shall deck the temple every day and see to it that the stoa adjacent to the Æsculapium be kept pure. His revenues shall begin with the month Machaneus. The price of the priesthood shall be 5,000 drachmas, plus the tax on the sale.

Lucian says* that it is no less an honor to Æsculapius if those who resort to him sing the paeans composed by Isodemus of Troezene and by Sophocles, in his praise, than if they should write them themselves. Of those of Isodemus we know nothing more; but the heading of that of Sophocles † has been discovered beneath the Acropolis, though only a line or two can be read. Another noted hymn was that of Ariphron of Sicyon to Hygieia, quoted by Athenæus, ‡ and found inscribed at Athens in 1688, in conjunction with another to Telesphorus. § The hymn of Ariphron was translated by Johnson in the 48th number of the Rambler. Aristides composed any number of hymns, and was greatly delighted when the divinity informed him in a dream that one of them was sung in Egypt. The only inscription at Athens around which is diffused the aroma of personal interest is the following composition. It can lay no claim to poetic excellence, but is intended by the author to be couched in the form of a strophe, antistrophe, and epode. The composer is the zacoros of the temple. ||

"The offering of Diophantus of Sphettus. I thy faithful servitor ask thee this, O son of Apollo: How shall I enter thy golden temple, thou blessed one, ever desired, dear heart, if my feet no longer serve me, with which I once passed within thy sanctuary—unless thou wilt kindly lead me in healed, that I may behold thee, my patron god, brighter than the earth in springtime?

Diophantus thus prays to thee: Save me, O blessed one, O thou of mighty power, healing me of this villanous gout; by thy father, I beseech thee, to whom I loudly pray. For no one of mortals can give a surcease from such pangs. Thou, alone, divinely blessed one, hast the power; for the gods supreme bestowed in thee, all pitiful one, a rich gift upon mortals, as their deliverer from sufferings.

Thrice happy, O Paean Asclepius, is Diophantus, cured by thy skill of a torturing, villanous malady. Never more shall I walk like a crab, nor step as on cruel thorns, but nimble and upright, yea, as thou promised."

Pausanias speaks of no tablets at Athens inscribed with any method of cure, and we are left in similar ignorance by the excavations. In the Plutus, the cure is represented as instant by divine power, and so it would seem in the case of poor, gouty Diophantus. Therapeutic means, other than such as work upon the imagination, may have been employed, but, after all the excavations there, we can only say we do not know, unless the numerous bathing-scrapers (stlengides) among the offerings be regarded as evidence.

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* Encom. Demosth. 27.

† Athenaion, v. p. 340.

‡ Athen. xv. 63.

§ C. I. A. iii. 171.

|| C. I. A. iii. 171 a.

To pass across the gulf of Ægina, from the Æsculapium of Athens to the Æsculapium of Epidaurus, is to go from the offshoot to the parent stock. And yet, although Pausanias* was convinced that Epidaurus was to be regarded as the birth-place of the god, it is more probable that the cultus was brought by Phlegyan immigrants from Tricca, in Thessaly. The sanctuary at Epidaurus was situated five miles, according to Livy,† from the city itself, back from the coast, nestled among the mountains that surrounded it on every side, and shut it in completely from the outer world. The vale itself is small, but described as one of the loveliest in Greece, plentifully watered and lush with vigorous vegetation. A thick grove spread out about the temple, and covered the sides of the neighboring mountains. The ancients remarked that the Æsculapia were usually situated in the most salubrious spots to be found, and this must have been eminently true of that at Epidaurus. To the natural advantages, add all the splendors of consummate architecture, painting, and statuary, and we may easily recognize the sentiment as typical which led the painter, Pausias, to adorn one of the buildings, the Tholos of Polycleitus, with a picture of Cupid, his bow and arrows thrown aside, bearing the lyre instead,‡ fierce passion yielding to the power of music and the gentler influences. Somewhat similar was the subject of the pediment of the east end of the temple, which depicted the battle of the Centaurs with the Lapiths, brute passion against law and order, as that of the west end, the defeat of the Amazons. Music, hymns to the god, poetical recitations, dramas, and various games were made much of, and well provided for. Plato § represents Socrates as holding a conversation with an Homeric rhapsode, Ion, who had just returned from a victory he had won at Epidaurus; and the name of an Athenian comic poet, otherwise unknown, appears in an inscription as victor there in imperial days.‖ The remains of a stadium are still to be seen, and the theater is one of the most beautiful, as one of the best preserved, in Greece. Pausanias says** that Roman structures can boast greater elaboration of ornament, and Megalopolis a theatre of greater size, but, for real beauty and classic purity, who could vie with Polycleitus, its architect. That it should have been of such size as this implies, shows what must have been the crowds that flocked thither in the festival seasons. It was built upon the lower slopes of the mountain, looking out over the valley to the north, and the heights rose so quickly above it that the seats were in shade after midday. It has been fully cleared out recently, and must be worth a visit to see. Besides these structures, Pausanias †† describes in his time (second century, A. D.) the Dormitory in which the suppliants slept, awaiting the appearance of the god in dreams, a handsome fountain with ornamented roof, sanctuaries of Artemis, Aphrodite, Themis, the gods called Epidotæ, and of the Egyptian Hygieia, Æsculapius and Apollo. An ancient custom forbade any birth or death taking place within the holy ground.‡‡ If either of these events was to occur, the patient must be removed outside; and, as no building was erected there for them, the patient must give birth or die in the open air. This, however, was provided for in the time of Pausanias, by Antoninus, who erected a building for this special purpose, as well as several others, among them a bath. The remains in the valley show the bathing facilities to have been lavish.

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* Paus. ii. 26. † Livy, 45. 28. ‡ Paus. ii. 27. § Plato, Ion, 1.

‖ Ephem. Arch. 1883, p. 27. ** Paus. ii. 27. †† Paus. ii. 27. ‡‡ Paus. ii. 27.

Excavations were begun in the theatre by the Athenian Archæological Society on the 16th of March, 1881,* and are still progressing. After clearing out the theatre, the site of the temple was defined, and some of the other structures, as the Dormitory, the Tholos, and the temple of Artemis. Kabbadias, who conducts the excavations, concludes, from the architectural remains of the temple of Æsculapius, that it was built about the end of the fifth century, B. C., by followers of the school of Pheidias, among whom was numbered the artist, Thrasymedes, the sculptor of the famous statue of the god in the temple. This statue was of gold and ivory, and represented the deity of superhuman size, seated upon a throne, and holding in one hand a staff, while the other rested on the head of a serpent. A dog lay beside him.† Although Apollo, the reputed father of Æsculapius, was habitually represented without a beard, the son was commonly depicted with a full beard. At Epidaurus it was of gold, and gave occasion to the sacrilegious Dionysius, of Syracuse, for the utterance of a bon-mot, as well as for filling his pockets. At Olympia he had carried away the gold mantle of the statue of Zeus, because, as he said, gold was too heavy in summer and too cold in winter; and at Epidaurus he removed the gold beard, remarking that it did not become a son to wear a beard, while his father was everywhere deprived of it.‡

The Æsculapian scene in the Plutus of Aristophanes has generally been supposed to be a sheer fantasy of the poet's brain, concocted to ridicule the priestly cures in the temples; and Madame Dacier thought that the pretended god, with his daughters in the vision of Carion, was the priest with a bevy of prostitutes. It remained for Kabbadias to show that Aristophanes was rather describing a genuine religious belief of his day, and that his satire here was of the same nature as that which he poured out upon many other deities, and is to be compared with the Miracle Plays of the Middle Ages. In fact, his treatment of Æsculapius is far more dignified than his treatment of Bacchus in the Frogs, or all the gods in the Birds. He represents Carion as seeing what we find elsewhere dreamed.

Strabo, in speaking of Epidaurus,§ says that it is a famous place, especially on account of the epiphany of Æsculapius, who is believed to heal all manner of diseases, and has a temple full always of the sick, and of consecrated tablets on which the cures are inscribed, just as at Cos, and Tricca. Pausanias adds more in detail: ‖ "Within the precinct of Epidaurus there stand six slabs though there were more in ancient days, upon which are inscribed the names of men and women who have been cured by Æsculapius, and the malady also with which each suffered, and how they were cured. The inscription is in the

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* Athenaion, IX. p. 464.

† Paus. ii. 27.

‡ Cic. de Nat. Deor. iii. 34, 83.

§ Strab. 374.

‖ Paus. ii, 27.

Doric dialect." As Kabbadias * was digging on the north side of the temple, at a distance of about 24 feet, he discovered a building 250 by 32 feet, with an Ionic stoa facing the temple, which proved to be the ancient Dormitory. Within this he struck upon the wall of a medieval house, among whose stones he found more than twenty pieces of inscribed slabs, nine of which fitted together, and formed a slab so complete that the small losses can be filled by conjecture with great certainty. The other fragments are withheld from publication, for the most part, in the hopes that the slab to which they belong may be completed by further excavations. The height of the complete slab is 6 feet, width 2½, thickness, about 7 inches. The material is a grayish lithographic stone, especially selected, as it would seem, for its extreme fineness of grain and remarkable adaptability for receiving and preserving an inscription. None of the ordinary inscriptions found about the ruins are written on such stone. The front side is smoothed with great nicety, but the back is left rough, as if placed against a wall. Near by, was found a base with a channel into which the slab was probably set and fitted with lead, to hold it upright. The inscription consists of 126 lines in the Doric dialect, and its contents prove at once that we have before us one of the stelae mentioned by Pausanias. It reads as follows :

"God (be with us). Good fortune (attend).
Cures performed by Apollo and Æsculapius.

Cleo five years with child.—This woman being already five years with child came to the god as suppliant, and slept in the Abaton ( Dormitory), and as soon as she had gone forth from this, and was beyond the temple grounds, she gave birth to a boy, who, immediately after his birth, of his own accord, washed himself in the fountain and walked about with his mother. Meeting with such good fortune, she had inscribed upon her offering :

'Not at the size of my tablet wonder, but more at the marvel.
Cleo for five long years was bearing the weight of her burden,
Till in the temple she slept, whence as a mother she went.'

A three years' child.—Ithmonica of Pellana came to the temple for offspring, and having lain down to sleep she saw a vision. It seemed to her that she asked the god that she might become pregnant of a daughter, and Æsculapius replied that she should become pregnant, and if there was anything further she desired, it should be granted to her ; but she said that she wished nothing more. Afterwards, having become pregnant she carried the child for three years, till finally she came to the god as suppliant for delivery. On lying down to sleep she saw a vision ; she thought the god asked her if she had not all she had asked for, and was she not pregnant ; for she had said nothing about delivery, and that too, though he had inquired if there was nothing else she wanted, and told her he would grant it ; but as she had come as suppliant for this at last, he said he would grant it to her. Then going hastily out of the Abaton, as soon as she was beyond the sacred limits she gave birth to a girl."

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* Ephemeris Archaiologike, 1883, pp. 197–238.

The belief in delayed births of this kind was evidently very common, and the author of the Hippocratic treatise on the Nature of the Infant,* thinks it necessary to prove that they cannot occur. He says he has heard of them often, and explains the belief among women in their existence, from the fact that the womb becomes distended by wind from the abdomen and the delay of the courses, from which relief comes after a time, and then pregnancy coming on, the time is counted from the outset. But I find no account of any such precocious infants as that of Cleo. Appeal to Æsculapius for a child, we have mentioned also in an hieroglyphic inscription from Egypt, belonging to the first century B. C. The high priest at Memphis prays with his wife for offspring, and a vision appears to him of the god, promising compliance, if he will build some addition to the temple structures. The building is constructed and the child is born.†

"A man with the fingers of his hand paralyzed except one, came to the god as suppliant; but on seeing the tablets in the sanctuary he became incredulous of the cures, and ridiculed the inscriptions. However, he lay down to sleep and saw a vision. He thought that he was playing dice in the temple, and as he was about to make a throw with the die, the god having appeared leaped upon his hand, and straightened out his fingers. When the god had stepped off, he seemed to bend his hand together himself, and then extend his fingers one by one. When they were all straightened out, the god asked him if he should still disbelieve the inscriptions on the tablets in the sanctuary. 'No,' he replied. 'Well, then, that you were incredulous before, is no cause for so much fear. To the end that you may be trusting for the future, your fortune,' said he, 'shall be such as the believer's.' ‡ At daybreak he went forth cured."

Such lessons to the sceptic and the scoffer were, no doubt, needed at times, but forgiveness follows quick upon repentance. In the next, a woman from Athens, perhaps because she was a woman, and should have been more trusting, receives a light punishment.

"One-eyed Ambrosia from Athens.—This woman came as suppliant to the god, and while walking about the sanctuary, ridiculed some of the cures as incredible and impossible—that the blind and halt should be cured by seeing a vision only; but when she slept she saw a vision. She thought the god stood by her, and said that he would indeed cure her, but in return she must consecrate in the sanctuary a pig of silver, as a memorial of her stupidity. Saying this, he parted the eye that was diseased and poured in some lotion. When day came she went forth whole.

A dumb boy came to the sanctuary as suppliant for his voice, and when he had offered the initiatory sacrifices and completed the customary rites, the servitor who carried the sacrificial fire, and was standing by, turning to the father of the boy said: 'Do you promise within a year, if you obtain that for which he is come, to offer the proper sacrifices for the cure?' Suddenly the lad exclaimed, 'I promise,' and his father in astonishment bade him speak again. He did speak again, and from that time was cured."

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* Littré, vii, p. 532.

† S. Birch in Archæologia, xxxix, p. 320 seq.

‡ The loss of some letters in this passage, and the possibility of different divisions of the letters into words, render the exact language uncertain. Weil (Reinach, in Revue Archéologique, 1884, ii. p. 78) suggests the following, in which the language is smoother, but the affected play of words scarcely harmonizes with the severe simplicity of the remainder of the inscription: "Then, because you were incredulous before about them, though they are not incredible, for the future, said he, let your fortune be incredible."

This story recalls the dumb son of Crœsus, who burst into speech when he saw the Persian soldier about to slay his father.* The case is less incredible than some of the others, and the cure comes before the vision. Aristides declares † that many dumb persons have recovered speech by drinking the water of the sacred spring at Pergamus.

"Pandarus, a Thessalian with marks on his brow.—This man when asleep in the sanctuary saw a vision. The god seemed to him to tie his own fillet over the brands, and to bid him when he was without the Abaton to take off the fillet and consecrate it in the temple. Day dawning, he awoke, took off the fillet, and found his brow cleared of the marks. The fillet he consecrated in the temple." Stigmata is the word in the original which I have translated marks or brands. It is not likely to mean a spot or birthmark, for in the next instance it is called grammata or letters, and would seem to show that Pandarus had been at some time branded,‡ as a slave or otherwise, as was not uncommon, or perhaps tattooed. He appears to have had a neighbor, Echedorus, who was troubled in the same way, and when Pandarus returned home with his brow cleared, Echedorus proposed to try the same experiment, and Pandarus sends money with him as a thank offering for the god. Hence the stone continues: "How Echedorus received the letters from the brow of Pandarus in addition to his own. This man having received money § from Pandarus to make an offering to the god at Epidaurus, in behalf of the donor who gave the money, in his sleep saw a vision. The god seemed to him to stand by him and ask if he had any money from Pandarus. If so, he should deposit it as an offering in the sanctuary; but he denied that he had received any such thing from him. However, if the god would make him whole, he would get a picture of him painted and would consecrate that. Then the god bound the fillet of Pandarus upon his brands, and bade him when he was gone forth from the Abaton to take off the fillet, wash his brow in the fountain, and look into the water. When day came he went forth from the Abaton, took off the fillet, from which the letters had now vanished, looked down into the water and saw that his brow had acquired the brands of Pandarus in addition to his own." The similitude of the punishment of Echedorus here, and that of the thievish Euclides in the Plutus ‖ is striking. The next history exhibits the god in a sportive mood.

"Euphanes, a boy of Epidaurus.—He slept in the sanctuary, for the stone. The god seemed to him to stand by and say, 'What will you give me if I make you whole?' He replied, 'Ten dice.'* The god burst out laughing, and vowed he would cure him. When day came he went forth sound."

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* Hdt. i, 85. † Aristides, Dind. i. p. 413. ‡ Aetius, 8, 12; Dioscorides, 2, 95.

§ Coins occur often among the offerings at Athens. C. I. A. ii. 835, 836.

‖ Aristoph. Plut. 716-725.

"A man came to the god as suppliant, with one eye so far gone that it had eyelids only and nothing beneath them but the empty socket. Now, some of those in the sanctuary spoke of his simplicity in thinking that he would receive his sight, when his eye had no existence whatever, only a cavity. However, a vision appeared in his sleep; he thought the god boiled some kind of a drug, and then drawing his lids apart poured it in. At daybreak he went forth with his eyesight completely restored." Evidently a new eye had been manufactured. The circumstances of the next account, which is a veritable idyl, appear to me to be these: Some gentleman journeying to the shrine has ridden forward in haste at the last, leaving his slave who carried his baggage to trudge along and overtake him at his leisure. The episode is called the Drinking Cup.

"A slave carrying his master's baggage was journeying to the sanctuary. When he had arrived at the Dekastadion, he fell down, and on arising opened his pack and inspected the shattered articles. Seeing that the cup from which his master was accustomed to drink was broken, he was in great distress, and sitting down tried to put the shards together. A wayfarer observing him, exclaimed, 'You unlucky fellow, why are you trying to put that cup together so aimlessly? For not even the Epidaurian Æsculapius could make it whole.' Hearing this the slave put the pieces together into his pack and proceeded to the temple. When he arrived he opened the pack, took out the cup, and found it whole. He told his master all that had been said and done, and the latter consecrated the cup to the god."

Next we have a sort of Peeping Tom of Coventry.

"Æschines, after the suppliants had gone to rest, climbed a tree and peeped over into the Abaton; but, losing his balance, he fell from the tree and struck his eyes on some palings. Being badly injured, and becoming blind, he presented himself as suppliant to the god, and after a night's sleep was cured."

Next follows a neat bit of surgical work.

"Euippus carried a lance-head six years in his jaw; but, when he had fallen asleep in the sanctuary, the god drew out the lance-head and placed it in his hands. At daybreak he went forth with the lance-head in his hands."

"A man of Torone (in Thrace) that had leeches.—This man saw a vision in his sleep. It seemed to him that the god, having cut open his breast with a knife, took out the leeches, gave them into his hands, and then sewed up his breast again. When day came he went forth with the creatures in his hands, and was cured. He had swallowed them through a device of his stepmother, who had put them into a porridge for him." The Greek never loses a chance for a fling at the stepmother. A somewhat similar operation in surgery we shall meet with again.

"A man with a stone in his privates.—This man saw a vision. It seemed to him that *se cum pulchro puero coire*, and in the act he ejected the stone, and taking it up went out with it in his hands." In the Hippocratic treatise on Diseases,* I find a parallel to this extent: "By giving a purgative to a person with a stone they have driven the stone into the urethra by the force of the purge, so that it was ejected with the urine."

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* Such astragali were consecrated at Athens. C. I. A. ii. 776.

"Hermodicus of Lampsacus (on the Hellespont), paralyzed in body.—The god cured this man while he slept, and commanded him, when he went out to bring as large a stone as he could to the sanctuary, and he brought the one which lies before the Abaton."

"Lame Nicanor.—As he was sitting still in the daytime, a youth snatched away his staff and fled. Leaping up, he gave chase, and from that day was cured."

"A man had his toe cured by a serpent.—This man, suffering severely from a tormenting ulcer in his toe, was brought out after daybreak by the attendants, and placed upon a seat. Thereupon, sleep fell upon him, and a serpent, issuing from the Abaton, healed his toe with his tongue, and when he had done this he glided back into the Abaton. The man was cured when he awoke, and declared that he had seen a vision, in which he thought that a youth of beauteous form applied an ointment to his toe." This resembles the cure of the Aristophanic Plutus, whose eyes are licked by two serpents which the god summons to his aid. Among the offerings in the temple at Athens, are mentioned several representations of serpents in metal.

Next we come to a case which proves beyond question that this is one of the veritable slabs read by Pausanias† when at Epidaurus. In describing the region about Hermione, he says that, by going a certain distance, and turning to the left, "there is the road to Halice. Now, Halice, in our time," he continues, "is deserted, but it was once inhabited, and there is a Halicean story on the stelæ at Epidaurus which are inscribed with the cures of Æsculapius. But I know no other trustworthy composition where there is any mention of a city Halice or men of Halice." The story is this:

"Alcetas of Halice.—This man, being blind, had a vision; the god seemed to approach, and open his eyes for him, so that he saw the trees in the precinct plainly. At daybreak, he departed whole."

The next is a case not of Sterling's, but sterling ambrosia.

"Heraeus, of Mitylene. This man had no hair on his head, but abundance on his chin. Feeling ashamed because others laughed at him, he came to sleep in the sanctuary, and the god anointed his cranium with a preparation, and gave him a good head of hair."

The stone closes with the following: "Thuson, of Hermione, a blind boy, had his eyes licked, while awake, by one of the dogs about the temple, and departed cured." The dog here, as the serpent above, is regarded as the agent and servitor of the god. The fragments of the other slab contain another cure of the same kind, as it says: "One of the sacred dogs, with his tongue, healed a boy that had an ulcer on his head." This function of the dog has excited considerable interest and some discussion, and M. Gaidoz has shown* that the belief in the curative powers of the dog's tongue, for sores, is widespread, from India to the extremity of Europe, and he might have added America, for I have heard of it often in my youth.

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* Littré. vi. p. 154.

† Paus. ii. 36. 1.

This inscription is remarkable not only for its contents, but for the extreme simplicity of its language, and the classic repose in recital. There are no rhetorical artifices, or rhetorical exaggerations, such as are met with in later days, but the marvelous tale is told as the sculptured frieze might tell it. The forms of the letters show that they were inscribed upon the stone about the third century, B. C. But the miracles recorded in the histories themselves belong to an earlier period. Their own internal evidence is to the effect that each was originally written, at least in substance, upon an individual tablet, and there remained till they were gathered together, and inscribed in the present permanent form. Something similar is known in the temple at Athens, and in that of Amphiaraus, at Oropus. The cult at Epidaurus must have been quite ancient, and possessed of wonderful vigor at the beginning of the fourth century, when the splendid temple and theatre were built. The latest news from the excavations brings tidings of the discovery of two inscriptions of the sixth century, B. C., the earliest authentic records; but we have one that, we can say with considerable certainty, mounts almost as high. In the fragments of the historian, Hippys of Rhegium, who flourished at the beginning of the fifth century, B. C., occurs the following story, quoted by Ælian,‡ who adds that it was a case where human skill was powerless:

"A woman had a worm, and the cleverest physicians failed to cure her. Accordingly, she went to Epidaurus and besought the god to succor her malady. The god was not at home. However, the temple servitors laid the woman to sleep where the god was accustomed to heal the suppliants. The woman lay at rest, as she was commanded, and the assistants of the god performed the operation for her cure. They cut off her head from her neck, and one of them put down his hand, and drew out the worm, and a huge monster it was; but he was unable to fit the head on again, in its proper place. Thereupon the god arrived, and was angry with them because they had attempted a task that was beyond their skill. But he, by some invincible and divine power, returned the head to its place, and restored the woman." Now, see what one of the fragments of the second slab says: "Aristagora, of Methana.—She had a worm in her bowels, and slept at Troezene, in the sanctuary of Æsculapius, and saw a vision: she dreamed that the god was not there, but in Epidaurus, and his sons cut off her head, and, being unable to put it back again, sent some one to bid Æsculapius come. In the meantime, day comes, and the priest sees† her head severed from the body. The following night, Aristagora saw a vision: she thought the god came to her from Epidaurus, replaced the head upon the neck, and then, cutting open her bowels, took out the worm, and sewed them up again; and after that she was well." The stone evidently presents the elder form of the story, and it is quite probable that the cast of it, as originally given by Hippys, has been altered by those who quoted him.

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* Revue Archéologique, 1884, ii. p. 217. seq.

‡ Æl. Nat. Hist. ix. 33. † This is to be understood as referring to a dream of the priest's, no doubt.

Strabo* relates that from the cures inscribed in the consecrations in the temple of Æsculapius at Cos, it is said that Hippocrates trained himself in the medical art. And Pliny† more specifically: "Since it was the custom for those delivered from diseases to inscribe in the temple of the god at Cos what had healed them, that it might assist others in like diseases, Hippocrates is said to have transcribed these records, and, as Varro believes, when the temple was burned, instituted the medical art called clinic." It is evident that our Epidaurian stelæ did not belong to this class at all. The cures are all miraculous, without the intervention of any therapeutic means whatsoever. But that these were employed, at least at a later time, is proved by another inscription, the epigraphic character of which indicates the imperial period. A certain M. Julius Apellas, from over-seas in Caria, says in his offering‡ that he was often sent for by the god when he fell ill and had attacks of dyspepsia. "On the voyage, while in Ægina, he commanded me," continues the tablet, "not to get angry often; and when I had arrived at the sanctuary, he bade me keep my head muffled for two days while it was rainy, to take bread and cheese before meals, celery with lettuce, to bathe myself without assistance, to exercise in running, take bits of citron soaked in water, rub my ears against the wall in the bath, use swings in the gymnasium, take mud baths in wrestling sand, walk barefoot for exercise before going into the water bath, mix wine with the warm water of the bath, bathe myself alone, but give the fee to the attendant, to sacrifice in common to Æsculapius, Epione and the Eleusinian deities, to take milk with honey; one day when I drank milk alone he said, 'Put honey into your milk to cut it.' And when I besought the god to release me more speedily, I dreamed that after using mustard and salt I went forth cured from the Abaton, and a lad led me with a smoking censer, and the priest, and he told me he would cure me, but I must pay the fee for my recovery. Accordingly I did what I saw in my dream, and on using the salt and mustard moist I felt ill, but while bathing I had no pain. These things for nine days after I came (and the god touched me, both my hands and breast§). On the following day, when I was sacrificing, the flame leaped up and burned my hand, so that blisters were formed. But after a little, my hand became well by continuing to use anise with olive oil. And he told me for the headache (indeed, I was not accustomed to have the headache. At all events, to make a long story short, after the use of the oil I got rid of the headache) to gargle my palate and tonsils with cold water. He bade me also to inscribe these things in all gratitude, and I departed cured."

This inscription bears a striking resemblance to the vagaries of Aristides, though the remedies seem on the whole much better suited to the case. We have the same summons by the god to his sanctuary, the same continual direction in dreams, and many of the same exercises. Bathing is here made great use of, while Aristides was commanded to give it up. No emetics are mentioned, and no purges, so numerous in Aristides, unless the honey so acted. Such records might give some assistance to an Hippocrates. Another inscription* of a late period is somewhat mutilated, but describes how a man comes from Sinope, on the Black Sea, and by the appearance of the god is cured of scrofulous swellings on his neck, and of a cancer.† No remedies are mentioned, as it appears. The other records at Epidaurus, so far as published, add nothing further to this branch of our subject.

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*Strab. 657. †Nat. Hist. xxix. 2. ‡ Ephem. Arch. 1883, p. 230.

§ This laying on of hands, or touch, appears in the Plutus (728), and is mentioned by Solon (Frag. xiii. 62) as the great panacea.

But a marble tablet now long known,‡ and supposed to have come from the temple of Æsculapius on the island in the Tiber at Rome, reads to this effect: "The god commanded a certain Gaius, a blind man, to go to the holy altar and worship, then from the right towards the left and place five fingers on the altar, then lift his hand and lay it on his eyes. Thereupon he saw perfectly well, and the people stood about and rejoiced with him because virtues were still alive in the time of our Emperor Antoninus." Another named Leucius, sick with the pleurisy and given up by every one, was enjoined to take from the altar some ashes and mix them with wine and lay them on his chest. He was cured. Julianus spit blood and was given up by all. He was commanded to take some seeds of the pine cone from the altar and eat them with honey for three days, and he was saved. Valerius Aper, a blind soldier, was ordered to take blood from a white cock, and, mixing it with honey, to use it as an eye-salve for three days, and he was healed. Fleetwood, an editor of these inscriptions, at the end of the 17th century, thought they were concocted by the pagans, that they might seem to have some miracles to oppose to those of the Christians. We know now that the belief in such miracles and the custom of erecting them on inscribed tablets were old before Christianity was established.

To this day these beliefs are not dead in the Greek world, not to go beyond. The Virgin and the saints have taken the place of Æsculapius and Hygieia. Every year to the island of Tenos in the Archipelago hundreds flock at the approach of the spring festival, whole families coming to adore the Panaghia and solicit her favors. A long paved road leads from the quay up to the sanctuary, over which the women make their way on hands and knees, crossing themselves between the eyes. At the convent they establish themselves wherever they can; the last comers camp outside. So pass a night and a day, till the sacred vigil, like that of Æsculapius, draws on. They pack themselves into the church, and kiss the images wherever they can be reached. The bishop appears, accompanied by the clergy, and the service begins. This consists of interminable litanies and chants in a high nasal tone; the congregation respond amen. At times guns are discharged in the courts. All this is kept up till morning breaks.

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* Ephem. Arch. pp. 237–8.

† The same word is found among the consecrations at Athens. C. I. A. ii. 836.

‡ C. I. G. 5980.

During the day it is noised about that in the sacred crypts, where the lustral water and the holy relics are found, the Panaghia has performed miracles. A blind man has received his sight, a deaf man hears, a cripple walks with ease, a mad man has recovered his reason. As these favored persons scatter through the town where the faithful are celebrating the festival, mothers offer them their children to be blessed; they touch their garments with awe, the divine visitation is so fresh upon them. The great majority, however, depart as ill as they came, but they carry with them at heart an invincible hope; and the festival of the following year will find them prostrated in the same place, praying with the same fervor, animated by the same faith.*

## ARTICLE II.—ON THE TREATMENT OF EXOPHTHALMIC GOITRE.† BY A. D. ROCKWELL, A.M., M.D., OF NEW YORK.

I have had experience in the treatment of fifteen cases of Basedow's disease, or exophthalmic goitre. Four of these cases were reported in the *New York Medical Record,* vol. xvi, No. 14, six of them in vol. xviii of the same journal, No. 11, and one in the *New York Medical Journal* for June, 1881. Under the use of the galvanic current mainly, six of these cases were either completely or approximately cured, two decidedly improved, one only slightly benefited, while in two cases no results followed the most varied and persistent methods of treatment. The remaining four cases have never been reported, and I propose now to briefly call attention to them. It is not to be understood that this number limits the cases of this character that I have seen and treated, but those only which have undergone treatment at my hands for a sufficient length of time to render them of statistical value.

One reason for again broaching this subject lies in the fact that not only are the possibilities of treatment in general in exophthalmic goitre decidedly underestimated, but there is a tendency, too frequently manifest in the cases that have come under my own observation, to reserve for the final trial the form of treatment that the best experience indicates as of primary importance. In several instances, strange as it may appear, it had never occurred to the practitioners in charge of the cases that possibly electricity might be of some value.

In the management of these cases, our efforts should be of a threefold nature: 1st, attention to diet and hygiene; 2d, internal medication; 3d, electricity. In some cases I have found that the most rigid and conscientious observance of certain fixed rules, in regard to eating and drinking, and the avoidance not only of *excess* in every department of mental and physical hygiene, but the repressing of ordinary and legitimate emotions and passions become absolutely essential. While no single regimen that could be mentioned would be suitable in every case, yet my experience confirms the oft-repeated statement that a bland diet is to be recommended, and the more successfully I can persuade a patient to avoid all forms of stimulants—tea and coffee, and rely to a considerable extent upon milk—the better for her. I say her, because the number of men who suffer from the complaint is comparatively few. Much also may depend upon the administration of medicine, for there are formulæ which in many instances exercise a very powerful control over the symptoms. It is very little to say that electricity will often benefit these cases after the failure of all internal treatment, or that it is capable of still further benefit after medicine has accomplished considerable and then ceases to be of further service.

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* Girard, L'Asclépieion d' Athènes.

† Read before the New York Neurological Society, April 7, 1885.

On the other hand, it is also true, although not in the same degree, that medicine in some cases very energetically supplements electrical treatment, when the latter, to use a familiar expression, seems to hang fire. Among all the remedies and combination of remedies suggested, there are none that my own experience so entirely approves as the formula which includes iron, zinc, digitalis and ergot. It has, both alone and in connection with other treatment, proved so efficacious that it is desirable to give it as wide a publicity as possible. The therapeutical measure, however, which stands pre-eminent, and to which all other forms of treatment must, as a rule, be but supplementary in the management of exophthalmic goitre, is electricity; and it is hardly necessary for me to designate galvanism as the proper form to be used. An element of especial importance in the treatment of this disease is persistency of effort. In a number of cases that I have seen, it was long before any radical change was observed either by the patient or others, and it may be many months before the full effects of treatment become manifest.

One of the most satisfactory results that I have been able to record, or have seen recorded, was in a case directed to me by Dr. A. R. Corman and Dr. Van Santvoord, in June, 1882, and which may be designated as:

*Case* 12.—The patient, a young lady aged twenty, presented all the symptoms of the disease in an aggravated form. The eyes were unusually prominent, the goitre large, but quite soft, and the breathing rapid and oppressed. The pulse ranged from 120 to 140. I have counted it as high as 160, but it was more frequently 140 than 120. The patient was able to take but little exercise, or even go upstairs, without experiencing much distress, and in every way the case was an aggravated one. She was treated from June 11, 1882, to March 29, 1883, a period of nearly ten months, and received in all sixty-nine applications of electricity. The result was a complete dissipation of every symptom, with the exception of a slight prominence of the eyes, hardly noticeable, however, even to strangers.

Upon examining this case in connection with her physician, Dr. Carman, a short time since, I found not a trace of the disease, with the exception of this slight prominence of the eyes, which the parents were inclined to think was congenital. The pulse was 72, and not especially excitable. The necessity of perseverance, to which allusion has been made, needs no stronger emphasis than that afforded by this case.

*Case* 13.—Miss S., aged 28, was sent to me by the late Dr. J. Marion Sims, Nov. 4, 1882.

The case was not of the most severe character, although all three of the cardinal symptoms were present to a noticeable degree. The eyes projected slightly, and the gland was enlarged to about the size of a hen's egg, and was somewhat similar in shape.

While at rest the pulse averaged only about 105, although upon exertion or under mental excitement I have known it to reach 135.

Under treatment the pulse in this case was reduced within a month to the uniform frequency of 80, but without appreciably affecting either the goitre or the exophthalmus. It was only after many repetitions of the external treatment, with the occasional introduction of the needles, that these symptoms gave satisfactory evidence of yielding.

In the beginning the measurement around the neck and over the tumor was fifteen inches; at the end of six months it was reduced to fourteen.

This patient also was seen by me nearly a year after the cessation of all treatment, when I found no evidences of any return of the symptoms.

*Case* 14.—Mrs. W., aged 30, was referred to me by Dr. J. Chauveau, April 18, 1883. In this case the results were much less satisfactory than in the preceding, and illustrates with what exasperating slowness the symptoms often yield. The patient has been under observation for nearly two years, and, with occasional intermissions, has been under active treatment, both electrical and medicinal, continuously. She has been much relieved, and will probably be relieved still more; but it is not probable that she will ever entirely recover.

For some six years previously she had a little swelling of the gland; but after three years, and about the third month of pregnancy, it greatly enlarged. After the birth of her child, however, it subsided to its former proportions. Two years before I saw her she caught cold; the gland again enlarged, and with it the symptoms of exophthalmus and rapid pulse rapidly developed.

I found the pulse to be 120, and the eyes quite prominent. The goitre, which was much larger on the right than on the left side, measured in its upper part, including the neck, 13½ inches, and around its lower part 15½ inches. The measurement is now 14½ inches around the larger portion, and 13 inches around the smaller. This does not, however, indicate the real change that has taken place; for quite a large extension toward the ear, impeding somewhat the movement of the head, but not affecting the measurement, has entirely disappeared.

The pulse has declined some 15 or 20 beats, but asthmatic symptoms have lately developed, greatly complicating the case, rendering the improvement less marked than it otherwise would be.

*Case* 15.—Mrs. G., aged 37, observed a slight enlargement of the thyroid, accompanied by cardiac palpitation, some two years before I saw her. These symptoms followed the birth of her third child, although the labor was no more severe or prolonged than previous confinements. When she fell under my observation, in April, 1884, the goitre, roughly stated, was about the size of a child's fist, the measurement around the neck being 14¾ inches. The eyes were only slightly, yet distinctly, protuberant. The pulse averaged about 115, but, as is so often the case, would frequently mount much higher. The patient's health was very poor. She was anæmic and able to endure but little fatigue. Her sleep was disturbed and insufficient and her digestion bad. This patient was treated until October, 1884, and in various ways received 52 applications of electricity, with results almost equal to those obtained in the first case detailed.

The goitre has practically disappeared, as well as the exophthalmus.

The pulse seldom rises above 90, neither have I ever counted it below 80.

As was to be expected, her general health has improved in a marked degree.

In regard to the details of treatment in exophthalmic goitre, there is not very much to be said.

Any physician who has a good galvanic battery, and understands its mechanism, can obtain results more or less satisfactory, provided that neither he nor his patient becomes discouraged too readily, My own method is to first place the cathode over the cilio-spinal center, and the anode in the auricula maxillary fossa, gradually drawing the latter, after a few moments' stabile application, along the inner border of the sterno-cleido mastoid muscle, until the sternum is reached. The second step in the operation consists in placing the cathode over the goitre, and the anode in the region of the solar plexus. Variations in the method can be adopted according to the exigencies of individual cases and the experience of the physician. Neither is there any fixed law in regard to the strength of the current, since in one's relation to electricity as a remedial agent each patient is a law unto himself. Many illustrations might be given of this statement. In one case of exophthalmic goitre, which resisted the usual method of application, immediate and increasing improvement followed currents that were increased and decreased with exceeding rapidity, and without interruptions, by means of a rheostat.

Unknown to myself, this method had been successfully used before in an obstinate case by a Dr. Ancona, where the cure was accomplished only after the administration of 100 applications.

Summary of results: Of the 15 cases that were persistently and steadily treated—electricity being the main reliance—9 were either completely or approximately cured, 3 decidedly improved, 1 only slightly benefited, while in 2 cases no appreciable results followed persistent efforts.

## ARTICLE III.—TRICHINA SPIRALIS.* By ARCHER ATKINSON, M. D., BALTIMORE, MD.

It is a sad thought for us lords of creation to realize that we are a living prey to infinitesimal beings which revel over their *materies edendi* in bodies too small for the eye to discern, and yet in such hordes as to render death inevitable. And yet this disintegration of our tissues is but the beginning for other forms of life, and the less vigorous the powers of life in animal or plant, the greater is the likelihood of parasitic infection. All through nature the smaller feeds the larger animal, and in the watery world, especially, we see this shown in the vast destruction of the roe and young fishes by larger depredators which lie in wait seeking what they may devour. Throughout the walks of life we find the survival of the strongest, if not of the fittest.

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*Read before the Baltimore Medical Society, and by request before the Baltimore Microscopical Society.

While many of us cannot help but feel, with George Eliot, a repugnance at the thought of having our flesh consumed by worms after death, how much more does the sensitive soul recoil from the idea of having his flesh eaten before he himself has finished with it on this earth? Prominent among the pests which live on the human tissues are worms, chiefly the intestinal, which belong to the group of articulates called *Entozoa*, invertebrate animals, which during some period of their existence live within and derive sustenance from the bodies of other animals. Nearly all living things have their parasites within them, and man is no exception. Each animal imparts its own peculiar parasite to its devourer, as the rat to the cat, the rabbit to the dog. Such valued fishes as the turbot, and game birds as the woodcock, are filled with tapeworms, and the gigantic whale is attended by conunculæ, which attach themselves to its back and head. The rhinoceros is said by Du Cleoillet to cultivate the friendly attentions of an alarm bird, which both feeds on its parasites and sounds the first notes of danger by which this lubberly beast is cautioned to hide himself in the river. The so-called nitts of the horse are the larvæ of the œstrum fly, which cling tightly in seed-like dots to the mane and legs of the animal, to be changed into the bott-worm in the stomach; and a single horse is mentioned with 12,000 worms of large size in its stomach and intestines, besides 7,000,000 of very small ones. As many as one thousand millions of eggs have been calculated as existing in a single tape-worm, and yet these animals in turn harbor smaller parasites.

In man we find them in the blood and in the tissues. Adults alone harbor some varieties exclusively, while others are peculiar to the tender age of childhood. Nor is there any organ in the human body entirely free from them. Some of them are common both to man and the lower animals. We see the ascaris vermicularis in the child, the ox, the horse, and the pig, and the distoma hepaticum in the liver of the horse, the squirrel, and the sheep, as well as in man. It has been shown that a similar internal parasite in the camel has imparted a cutaneous disorder to its keeper, and in Bombay Dr. Balfour discovered in the blood of a fish bacilli resembling those found in connection with cholera in the human subject. The presence of worms of any kind in the body commonly denotes a low condition of health and an insufficient diet. In Iceland worms, cause one-third of the deaths of the people, and in Brazil and Egypt chlorosis which is common, is thought to depend on the presence of a peculiar worm in the small bowel. Certain tape-worms are confined to certain countries, as the largest variety is seen only in Russia, Poland, and Switzerland. In Abyssinia, exclusively, we find certain small tænia; while Egypt alone is the home of the terrible bilhorzoa. The small medina, or Guinea worm, is found only in upper South America, where it infests the heels of the natives.

The most horrible of all parasites which afflict the human body is the *Trichina Spiralis*, and its presence is not restricted to any class or country in which swine food is partaken of. This worm, or rather the capsules or cysts enclosing the parasites in the muscles, was first discovered in 1832, by a demonstrator of anatomy, in the body of an old man he was dissecting. He found great numbers of small, white, granular bodies, and that the dissecting knife encountered hardness which blunted its edge. He removed some and submitted them to Prof. Owens, the distinguished naturalist, who pronounced them a new worm, to which he gave the name of *trichina*, with the adjective terminal spiralis. In the Museum of Guy's Hospital, London, is a specimen of muscle containing the calcified capsules of trichina, which was donated in 1828. These were large, from the aggregation of the bodies and the extent of hardening around. In 1835 Cobbold mentioned the worm enclosed in a capsule, as announced by Paget. In 1847 Prof. Joseph Leidy, of Philadelphia, noticed in hog meat capsulated or encysted worms, resembling in every way the trichinæ he had seen in the muscles of man. This worm was thought by Kurchenmeister, in 1855, to be the larvæ of the trichocephalus dispor, and Leuckardt, in 1859, claimed that he had bred the trichocephali in the hog fed on trichinous meat. This threw light on many other obscure cases. The symptoms here were great debility, fever, and loss of sleep, with diarrhœa and great mental anxiety. Virchow saw trichinæ fed by him become fully matured in the bowel of the hog, and yet he could not believe it changed as above. About 1860 the presence of this worm ceased to be looked upon as simply a curiosity, but began to be considered in the interest of science, and as a most formidable enemy to man. In a young woman sick in the hospital in Dresden, with supposed typhus fever, very severe symptoms suddenly set in, and her death led to the detection of trichinous worms in nearly all her muscles in the intestinal canal, as well as Zenker, who made the autopsy, pronounced the hog to have been the original carrier of the parasites.

Every specimen of muscle examined showed great numbers of trichinæ in a living state, in some cases coiled up, and in others more or less straightened out, and each drop of intestinal mucus contained trichinæ also. It was found that the inmates of the house where this girl had lived had eaten of hog meat, and that they all had been sick in a similar way. The butcher, too, had been very ill with the same symptoms. Numerous researches then led to the conclusions that—

1. Man becomes infected (trichinous) from the eating of trichinous pork.

2. The muscle-trichinæ in the stomachs of mice become freed from their capsules and develop in the intestines of cats and dogs, as in man, into mature sexual worms.

3. The mature sexual worms, the intestinal trichinæ, attain their full growth at the end of seven days, and then yield young animals.

4. Young worms migrate from the intestines to the muscles of the same individual, whether of a person or an animal, and are found in the mesenteric glands, the abdominal cavity, etc.

5. They penetrate into and destroy the contractile fibres of muscles, and within these muscles grow to be perfect trichinæ.

6. These migrations cause in man a severe fever, called *trichinosis*, which results in death in about one-fourth the cases.

There have been several severe epidemics of this fever, the chief of which occurred at Corbach in 1860, at Plauen in 1861–2, at Colbe in 1862, at Posen in 1863, and at Erlangen in 1870. The most serious of all was in 1865, in the village of Hedersleben, where, out of 2,000 population, as many as 337 were seized, and 101 died.

We find two varieties of the worm. The smaller, or imperfect intestinal trachina, is a very fine round worm, thickest in its middle and pointed at either end. Its own intestinal canal may be seen by the aid of a very powerful lens, widening, soon after leaving the mouth, into a pouch-like stomach, and then narrowing again to empty into a miniature cloaca. The females are longer than the males, being about three times as long. The eggs of the females may mature at successive periods. The embryo trichinæ do not long remain in the human intestine, but soon find their way into the red muscles—some suppose by burrowing through the layer of the bowel, and others by passing up through the lymph vessels to be left just where the capillary vessels become very attenuated, and thus acting as a plug or embolism. It may be that the parasites are conveyed by both methods. After reaching the muscles they force themselves into and between the smaller bundles, which they destroy, and then roll themselves up in the cysts which they have burrowed out, these cysts being of an oval form, and consisting of the sarcolemma of the fibres, mixed with a little fatty matter. It seems to take the muscle trichina about two weeks to attain its full development, and in a single capsule there may be either one or two of the animals. The intestinal trichina seems to be a much shorter-lived worm than the muscle variety, which may possibly live for many years. The former usually ceases to exist in about six weeks. In old cases the cysts in the muscles become more or less calcareous, so as to give a "measly" appearance and a grating feel under the knife where large masses of them are concentrated. The aggregated cysts may be seen by the naked eye, especially in a slanting direction, but it generally takes an old searcher to observe them well. The time of their incubation varies from a few days to six weeks, and in 98 cases signs of the fever produced by the trichinæ became manifested in from 1 to 5 days. Out of 80 deaths, 35 occurred in from 21 to 30 days. Diarrhœa is quite frequent in the disease, from the presence of large numbers of the worms in the intestines. Considerable numbers of them may be tolerated in the early stages in some individuals, while in others a few days will suffice to bring on the most alarming illness.

Geographically, Africa seems to be less infected than other countries, and in Algiers only one instance has been reported, as far as known. In England, Germany, Denmark, and Sweden—in France, Russia, Austria, and India, the disease is known, and foreigners claim that in North America the animal finds its favorite home. In the late official report by Dr. Dettmar, who had been intrusted to examine into the advisability of prohibiting the importation of American pork into France, that gentleman advised that all the hogs in infected districts should be destroyed. This was in 1878–79, but further research appears to show that Dr. Dettmar reported that *swine plague*, and not trichinosis, was then prevalent in the Western States, and that animals with this swine plague were sent to market. Mr. Curtis, who has thoroughly investigated the subject of trichinosis, reports to the Agricultural Bureau in Washington that there is very little disease, of any kind, among our hogs, and that great care is observed by breeders and packers in sending only healthy animals to market. If we admit an equal prevalence of the worm in all these countries, we can readily see how the American, who eats meat three times daily, will be three times as apt to be inflicted as those in other nations who eat meat some of them once a day and others once a week.

The disease is far more fatal to man than to the hog. We know it is the custom to give the scrapings of raw beef to infants in cholera-infantum, and the Germans often eat their meat and sausage either raw or not sufficiently cooked to destroy the worms which lie in the thicker portions of the meat. This should be avoided if we wish to escape the inroads of the parasite. Protection lies really in shunning the use of pork altogether, or in seeing that it is sufficiently cooked *through* or is *thoroughly* sound. Nysten asserts that the worm is found only in muscles of such persons as are very debilitated from privation or from eating improper food. He gives the size of the worm as about one millimetre in length, and shows that in man it is found, as a rule, only in the red or voluntary muscles existing in the stomach and intestines, while *in transitu* to the muscles. Meat containing trichinæ is termed "measly flesh," for the same reason that now and then we apply the term measly to photographic paper when it is covered with papillary elevations. The worm is very low down in the scale of animal existence, and the number of them in the body of a diseased individual is to be estimated rather by the imagination than by actual count. As found in the cases of other worms, the eggs of the trichinæ, or, it may be, the very young animal, gain access to the body by means of raw food. In either case, if it be the egg that enters, the delicate shell is destroyed by the juices of the stomach, and the embryonic vesicle is left to find its ultimate destination in the muscles. Leuckardt more than once found the embryo of the tape-worm in the portal veins, having found its way into the blood or lymph vessels of the stomach or bowels, to be carried thence into the blood current to reach the capillaries. This same observer found 700,000 of the muscle trichinæ in a single pound of human muscle. It is the nature of the tape-worm to form cysts where the eggs are left to hatch by the heat of the body, and these cysts are preferably deposited in the intestines. Just so, we find in the muscles of such as have died from trichinosis masses of these cysts, feeling like minute grains of sand, and when these granules are examined under the microscope they are found to contain trichinous worms, more or less matured, coiled up into the smallest possible space. They are about one millimetre (1-25th of an inch) in length and about 1-600 of an inch in width—and it is said that good specimens show as many as 700,000 to the square inch.

The female worms increase with prodigous rapidity. Long after their discovery in 1832, it was thought their presence would do no harm, and in many cases this is true when they remain in a quiescent state; but no one is safe when infected with this worm. Often one of the first evidences of its presence is the irritation caused by the boring through the intestinal walls. After the trichinæ have reached the muscles and become encysted, they usually continue to grow until they have attained four times their former length, and as the cyst is now too small to accommodate them, they begin to coil up; hence the spiral shape, as seen in the specimen here shown. The affected limb now becomes tender and swollen, motion is made with difficulty, and great prostration follows, attended with low symptoms, like those of typhus fever. The case may end fatally in four or five weeks. If it is to end favorably, fever subsides, pains cease, swelling in the parts lessens or disappears entirely, and the patient quickly recovers, or the growth may lessen, still keeping him prostrate for awhile, until his naturally good constitution may enable him to surmount the difficulty and to drag out a tolerable existence. Repeated attacks may follow with the same or more serious results. Medicine may reach the trichinæ in the intestines, but hardly in the muscles. Prostration is the one great prevailing symptom of the disease, and it may exist for a long time without attention being directed to the true cause. Tumefactions of the muscles often occur, sometimes attended with abscesses. The face now becomes dropsical, and this anasarca extends to the limbs, while the serous cavities also fill up; the symptoms thus simulating some of those of acute Bright's disease. When recovery follows, convalesence is usually slow, months of good feeding being required to bring the patient again up to the healthy standard. The fear of return is ever before the individual, either from the entrance of fresh germs or from the increase of such worms as may still find lodgment in the body.

The dread of the disease in some countries has been such that the importation of pork from the United States was at one time entirely prohibited, but this restriction has to some extent been removed, the authorities finding that hogs raised in their own countries were as liable to disease as our own.

We rarely see under the field of the microscope more than one trichinous coil at a time, though some slides will show by slight motion two or more in the same specimen. The cyst, too, is very apparent, generally containing but a single worm.

Just now we see notices of hog cholera in some parts of the country. May not there be reason to conjecture that this disease is akin to the one we are considering? Much care is required in selecting meat for bacon. In the first place, the hog must be healthy, and not too old, the healthiest animal being the one which is allowed to run wild until ready for the fattening pen, when corn should constitute the feed. The dry curing of bacon is by far the best, keeping the flesh firm and retaining the fat, and being more certain to preserve the meat.

## ARTICLE IV.—MONSTROUS SPERMATOZOA IN MAN. By EPHRAIM CUTTER, M.D., OF NEW YORK.

The mystery of being and the transmission of life are none the less wonderful enigmas because they relate to ourselves and our offspring.

The most ardent woman's rights advocate cannot deny that she is acknowledged as a power in teratology. At a monstrous birth the usual query is as to the history of the mother. Painful or unpleasant impressions before the fourth month of gestation have been followed by monstrous births. Congenital nævi are everywhere called "mothers' marks."

The writer once delivered a woman where the deformity of the child was in the feet. On one foot the toes were ragged and uneven, while the other foot terminated like a soliped. At about the third month the mother saw a dog mangle the feet of one of her older children.

It is a point in this paper to show that the teratologist must look to the male for some of the monstrosities. Abnormal forms of human spermatozoa are found, which account for double-headed and bodied monstrous births better than our past state of knowledge. Some of these monsters have lived to maturity and are now making public displays for a living. They sing duets and play four-handed pieces on the piano. A three-headed woman was advertised on life-sized posters in this city. The writer confesses that in view of what comes after, he went to see this monstrosity, but it proved to be an optical delusion.

The following abnormal forms have been observed in the sperm of man.

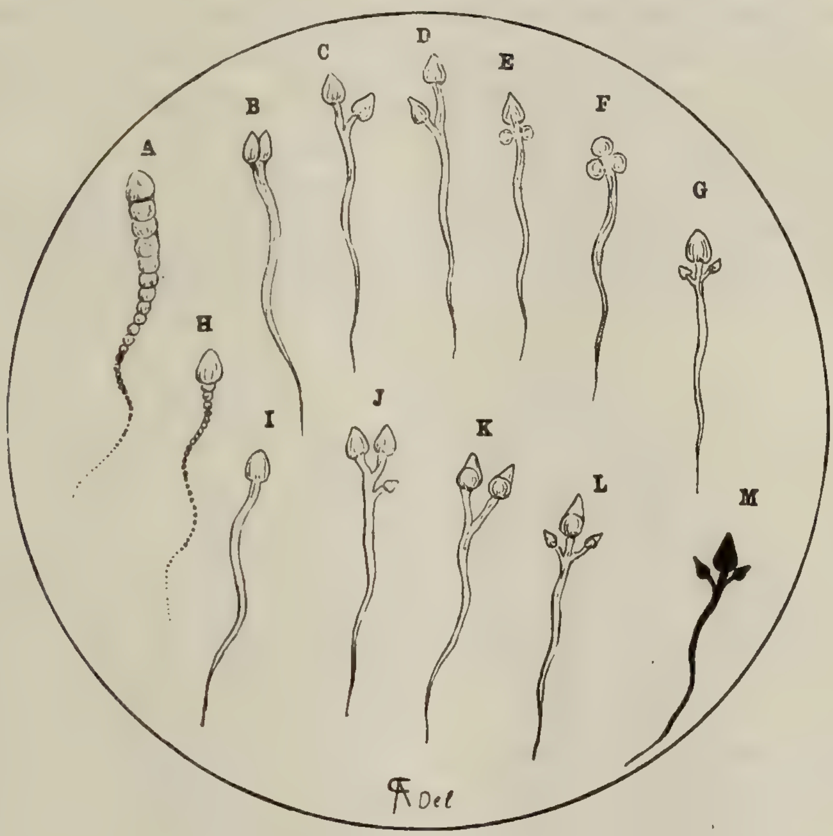
1. Spermatozoa with two heads.
2. Spermatozoa with three heads.
3. Spermatozoa with one head and two tails.
4. Spermatozoa with one head and three tails.
5. Spermatozoa with two heads and two tails.
6. Spermatozoa with two heads and three tails.

One spermatozoon is deemed enough to impregnate one ovum, and to transmit the qualities and peculiarities of the sires or grandsires to the offspring.

Large sums of money are spent by agriculturists to breed stock from sires of noted physique. It is a matter of common conversation to hear comments on heredity and descent from the sire. This, then, being the power that invests a single spermatozoon, what is to prevent the reasonableness of inferring that a double-headed, triple-headed, double-tailed, or triple-tailed spermatozoon, singly or in combination, may produce a double-headed and double-bodied monster, such as exist on the earth ?

And in the light of this communication may it not be that the difficulty in regard to a given monstrosity is in the testis of the father?

The first mention of monstrous human spermatozoa known to me was in an unpublished paper by Dr. J. H. Salisbury, dated 1861. He told me of this paper in 1867. By a reference to his paper the forms in a live state depicted in figure one were found, which may be described as follows:



(Figure 1.)

*Monstrous Spermatozoa in Man Living. Observed by* Dr. Salisbury.

I is a normal spermatozoon for comparison.

B is a double-header, where the heads start from one neck at the blunt end of the body.

C is a double-header, with second head on a neck below and to the right of the first head, which is also on a neck.

D, same as C, with second head turned to the left.

K, a double-header, with a bifurcation ending the body with symmetrical necks.

J, a triple-header, where a double-header has a third smaller head projecting from the body below the bifurcation—not being fully developed, but having a distinct neck.

E, F, G, L. M, are triple-headers. E is a sperm with two globar heads, almost sessile, situated opposite each other and just below the primal head.

F, like E, but the three heads all about the same size, globar and sessile.

G is like E, but the secondary and tertiary heads are less than half the size of the proximal head, and are provided with necks.

L and M are like G, but the extra heads have longer necks and more developed.

H is an ordinary spermatozoon, where the body and tail are moniliform, the larger-sized beads being next the head, and each beaded portion diminishing in a uniform taper to excessive minuteness at the end of the tail.

A is a monocephalic spermatozoon, with the body and tail divided into beads. Those of the body are nearly of the size of the head, and the taper not diminishing so rapidly in the cephalic as in the caudal half.

I, Figure 2, represents a spermatozoon with one normal head, and with the body divided into two tails.

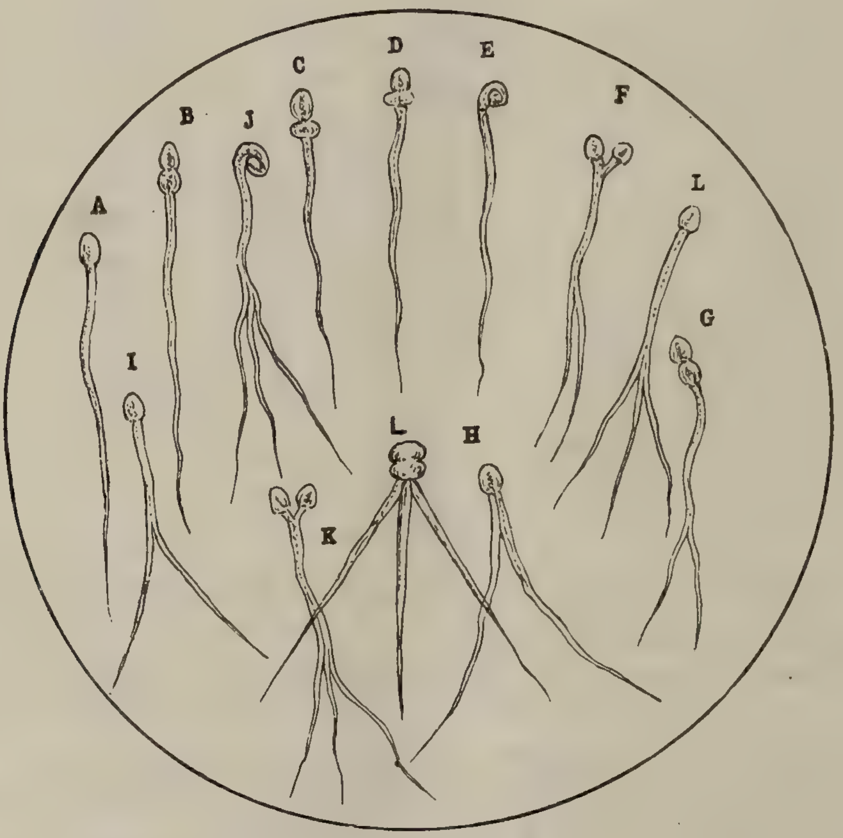
The proportion of monstrous spermatozoa varied in different individuals. The average was one in about 50,000. They moved much stronger, but slower than the normal forms. This difference was so great that they were first recognized by their slow, sluggish, but vigorous movements.

All these abnormal forms have been noticed in the same individual, as well as in different individuals.

The investigations that resulted in this discovery "were made on eight strong, healthy men, Teutons, varying in age from 25 to 30 years.

"In so delicate a matter it required no small persuasion to excite sufficient interest in the proper persons for them to allow me to experiment upon them in such a way as to make the researches of scientific value. As far as these labors have gone, I believe they may be relied upon for having been conducted with care and fidelity."

What precedes is the evidence of Dr. Salisbury. Corroboration by another witness is in order. The writer has studied the subject from a different point of observation—to wit, in the urine of patients suffering with spermatorrhœa.



(FIGURE 2.)

*Monstrous Spermatozoa from the urine aforesaid. Observed by the writer,* E. C.

A is a normal sperm for comparison. B, C, D, F, G, and K are double-headers. In B the double heads lie in the long axis of the body. In C the proximal head is wider than the distal head. In D the proximal head is so much broader that one might think it would have become a triple-header had its growth continued longer. F and K are like those of Dr. Salisbury's as to their heads. L has two heads of equal size. H and I have one head and two tails. I is a form such as Salisbury describes with two tails, each half as long as the body. F and G have two heads and two tails. In F the heads are mounted on necks. In G one head is above the other. J and L have one head and three tails. L is a double-header with three tails. K is a double-header with three tails. E is an abnormal-headed spermatozoon with one tail. J is the same as E with three tails. J, Figure 1, has also been observed by me. The tails of L and H arise close up to their heads. These monstrous spermatozoa have been seen by me in about one dozen cases, and demonstrated to others so often that those who choose to non-accept these testimonies will not commend themselves as good observers of the rules of evidence.

Remark. Possibly those who may care to go over the ground for themselves may find an advantage in following the simple plan of the writer in the examination of the urine for the abnormal spermatozoa. I use a cell 2½x¾-x1-16 inch, which may be made of a glass slide cemented with strips of glass. This put on a horizontal stage, and a dry ¼-inch objective, with a long working distance, gives a large field to work with, and saves time and trouble. The old-fashioned stand of Lerebours and Secretan is just the thing for this work; but, as this is out of date, the same horizontal stage may be secured by following the example of Prof. Nunn, of Savannah, Ga., by attaching the prism to the eye-piece tube. He uses a tube some six inches long, and finds it very useful when attached to an ordinary stand to demonstrate to his students and friends.

Jan., 1885. 213 W. 34th Street.

## ORIGINAL TRANSLATIONS.

### THE NATURE AND TREATMENT OF OZÆNA. COMMUNICATED TO THE THIRD INTERNATIONAL OTOLOGICAL CONGRESS, Bâsle, September, 1884. By DR. LŒWENBERG. Translated from *L'Union Médicale,* by H. McS. GAMBLE, M.D., Moorefield, West Va.

Notwithstanding the recent works upon ozæna, this disease remains enigmatical, and the results of its treatment continue to be unsatisfactory. For these reasons I have tried to discover the nature of the affection, hoping thus to succeed in setting some landmarks in order that we may be able to combat in an efficient manner a disease so grievous to the patient and to those about him. The following lines will contain an exposé of the results obtained by my researches.

Among the new resources of our science, two methods especially have seemed to me capable of dissipating the obscurity which still envelops this disease; they are:

1st. *Anterior and posterior rhinoscopy;*

2d. *Parasitological researches.*

Rhinoscopic exploration of the nasal fossæ upon the living subject has already given us important results by demonstrating that *true ozæna* (or simple ozæna) *is characterized*—outside of the fœtor, and of a greater or less impairment of the sense of smell—*by peculiar and well-defined anatomical lesions.* There is an extreme thinning of the pituitary membrane, with atrophy of the turbinated bones, especially of the inferior turbinated bone, and a considerable enlargement of the nasal fossæ. The enlargement of these cavities is such that, upon looking into the nose, one sees in the subject of ozæna a considerable extent of the posterior face of the nasal pharynx, and "when the patient is made to execute a movement of deglutition the peculiar phenomenon of pharyngeal contraction is observed." Besides, in consequence of the shrinking of the inferior turbinated bone, even the pavilion of the Eustachian tube is perceived, which ordinarily is not seen through the nose.

Ozæna is not accompanied by ulcerations, as was formerly believed. Per contra, the atrophied mucous membrane is constantly covered with solid and extremely adherent crusts, which emit the characteristic odor. According to M. Zanfal (de Prague), to whom we owe a great part of what we know about ozæna, the enlargement of the nasal fossæ would cause an abatement of the expiratory current of air which, then, would be powerless to expel the secreted matters; the latter would remain stagnant, would be dried up, and would form the crusts in question.

Besides the important results which I have just enumerated, and which have been confirmed by several autopsies, it seems to me that, at least for the present, there is nothing more to expect from rhinoscopic investigations, and I shall not recur to them in this memoir, which will treat especially of the microscopic examination of the products of the pituitary membrane, a subject to which I have paid special attention.

When we have to deal with an affection of which the salient feature is a fœtidity *sui generis*, an indication of a peculiar decomposition, our principal objective is naturally the study of the special conditions under which this chemical process takes place, and, above all, the investigations of the micro-organisms which determine it. It could not be otherwise, for the actual state of our knowledge not only permits us, but even enjoins upon us, to investigate the microbes, the multiplication of which is accompanied by the elaboration of the odorous product.

The decomposition in ozæna giving rise to a quite peculiar odor, it seemed to me reasonable, *a priori*, that we ought not to find therein the swarm of the common bacteria of ordinary putrefaction, but a special microbe. It was not, moreover, probable that we would meet with a champignon; for, besides that the mucidenées do not promote decomposition accompanied by putrid emanations, I have found the reaction of the mucus alkaline in fifteen out of sixteen patients whom I have had occasion to examine and to treat since I have been studying ozæna from this special point of view; but the champignons prefer acid media.

The first microscopic examinations gave me results comformable to my anticipations, results which subsequent studies have confirmed in a very convincing manner. As I have already shown at the congress in London (description upon ozæna), I have constantly found a special microbe, unique and characteristic, in the nasal mucus of those affected with offensive discharges from the nose. It is a very large coccus, always associated, so to speak, in pairs, and these latter grouped in chains or in masses. This microbe was always immobile, except in a single case, in which it presented a lively and undulating movement.

These micrococci are generally elongated, but to different degrees; they are sometimes rather spheroidal, sometimes rather ellipsoid. Sometimes their optical section is almost rectangular, as if they were cylindrical instead of being slender and rounded at both extremities. Upon examining them under the strongest amplification, for example, with the homogeneous immersion of one-eighteenth of Hartnack, after having colored them, especially with the gentian violet, I have sometimes recognized towards their middle a clearer transverse zone of a whitish color. I could not say whether there is a formation of spores there or, as appears to me more reasonable, a commencement of division; I have always seen this clear band at the point where no constriction as yet foreshadowed a future scission.

If this microbe resembles other cocci in form, it differs from them, per contra, by its large size; its longitudinal diameter is, according to my measurements, from 1.1m. to 1.65m.;* rarely I have seen still smaller specimens (méso-coccus of Billroth). It is consequently larger than the megacoccus of Weigert, which measured only 1.2 micromillimetres, and of which this author admired the great size. The microbe of ozæna is so large that it is perceived as a point under an amplification of 90 (Hartnack, ac. 3, obj. 4). The cocci which I have discovered in cases of otorrhœa are, on the contrary, much less voluminous.

As I have indicated above, the microbe of ozæna is found always, so to speak, as *diplococcus*, and these often connected in chains in the direction of their long axis, more rarely in masses (contrary to the gonococci which, according to M. Neisser, never unite in chains, but always in masses). These chains are united by a hyaline mass. In a single case I have found the coccus associated here and there under the form of zooglœa.

I consider the fact that this microbe is almost always found as diplococcus as the indication of an active pustulation. M. Neisser, having observed it likewise in his gonococcus, interprets it, on the contrary, as the sign of an extraordinary adherence of the two new individuals between themselves.

As to the method of examination, there is no need of any special preparation in order to find this microbe; the first glance cast upon a parcel of ozænous mucus generally shows it in innumerable quantities. I advise, however, selecting from the thin layers, and especially to take the mucous filaments which I have always seen stretched between the septum and the turbinated bones. I have preserved some preparations in which these filaments, simply spread out upon the slide and colored with an aniline dye, show nothing but an infinite multitude of diplococci, exactly like a pure culture of the characteristic microbe. It is necessary to reject the dried crusts; besides that their capacity hinders the microscopical examination, the cocci are more sparsely sown therein than upon the thin layers where the air finds an easy access. The thick purulent masses are equally poor in cocci.

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*Micromillimetres.

The aniline colors give magnificent views, above all fuchsine and the gentian violet. My coccus is colored by all the aniline dyes which I have had occasion to try, among others by the methyl green which, according to M. Neisser, would not stain the gonococcus. Double staining, at first with an aniline dye and afterwards with carmine, may be utilized for studying the penetration of the coccus into the interior of the cellular elements or for examining thick pieces.

In a single case (a puny little girl eight years of age), I have seen, besides this characteristic coccus, very numerous bacilli; I have observed the same thing in frequently repeated examinations of the same child. I will add that, in this single case, was the nasal mucus neutral, whilst in all the others it turned blue the red paper of turnsol. As to the other symptoms and the therapeutic results, this case resembled all those which I have observed.

In a few other cases of offensive disease of the nose, finally, I have seen here and there some bacilli curved like a sickle or bent like an elbow, forms difficult to interpret and to classify, and which will have to be subjected to subsequent researches.

Being given the role which *scrofula* is reputed to play in the genesis of ozæna, I do not think it useless to mention the fact that no one of the micro-organisms that I have found in the course of my investigations upon ozæna presented the colorings peculiar to the microbe of tuberculosis.

The coccus resembles that of *infectious pneumonia*, and differs from it only by its more considerable dimensions. It presents likewise morphological analogies with that of the macerations of meat. According to my bibliographical researches, the first mention of microbes observed in ozæna is due to *M. B. Fraenkel*, who, about 1878, said that the mucus secreted in this disease consists, for the most part, of corpuscles of pus strongly sprinkled (*durchsetzt*) with micrococci. Since then other observers have discovered in it either cocci, or bacteria, or both together, but all without studying them in detail, or considering them as characteristic of ozæna. The only author who has devoted his attention to extended investigations upon this point is *M. E. Fraenkel;* but the results of his researches differ absolutely from mine. Whilst I have found (apart from the rare exceptions above indicated) only the great coccus which I consider as characteristic of ozæna, my confrère has regularly encountered:

1st. Small cocci;

2d. Large cocci relatively rare;

3d. Slender bacilli;

4th. Large fusiform (*bâtonnets*).

And among these four groups he has, *above all, seen* the first and the fourth, to wit: *the small coccus and the large bâtonnets.*

How are the so divergent results of our investigations to be explained? Simply, in my opinion, by the difference of my method of examination from that of M. Fraenkel. It is an astonishing thing that the learned physician of Hamburg, to whom we owe besides such interesting researches upon ozæna, has directed his investigations, not to the masses naturally secreted in this disease, but exclusively to the contents of the tampons of cotton placed in the nasal fossæ according to the therapeutic procedure of M. Gottstein, who advises treating ozæna exclusively by the introduction of wads of cotton in the nose.

But it is perfectly apparent that my confrère has not been dealing with the simple products of the pathological work of ozæna, but with a sort of artificial culture made, moreover, not with the natural fluid of the ozænous secretion, but with the transudation due to the irritation of the pituitary membrane by the tampon, an irritation admitted by MM. Gottstein, Fraenkel and other savants.

It is necessary to remember, moreover, that the sojourn of a tampon in a nasal fossa profoundly modifies the conditions of development of the microbes by preventing, on the one hand, the access of air, and, on the other, the evaporation of the water which enters so largely into the composition of the mucus.

In my opinion, the nasal fossæ constitute an apparatus analogous to the *aeroscope*, intended, as is well known, to collect the germs floating in the atmosphere, by causing the air to pass over viscid surfaces which retain and fix the microbes and their germs. Each inspiration exercises a powerful demand upon these organisms of such tenacity and such lightness; in gliding along the multiple nasal anfractuosities, they are retained by the mucus, especially by the viscous product of the ozænous secretion. After that it is clear that in this affection the nose contains, besides the pathognomonic microbe, by compulsion all the germs of the ambient atmosphere. Those among them which find a favorable medium of culture in the transudation produced by the initiative action and which saturate the tampon, and under the embarrassed conditions of aeration and evaporation which I have just mentioned, alone develop and pullulate therein. Let us not forget, moreover, that the tampons may themselves contain, just before their introduction, atmospheric germs, and that, finally, so long as the secreted fluid has not entirely saturated the cotton employed, the inspired air may still deposit therein different micro-organisms. That which M. Fraenkel has studied is then, in fact, but the product of a sort of aeroscopic culture, instituted under peculiar conditions and in a transudation which an initiative action has produced in an ozænic nose. The difference between this " culture and the natural pullulation of the coccus of ozæna in the nasal fossæ of the patient becomes more striking still if we notice certain peculiarities resulting from the researches of M. Fraenkel. After a sojourn of two hours in the nose, the tampon still contained a neutral liquid. The latter was shown to be alkaline only at the end of four hours. My researches, which have given me besides somewhat different results in that after four hours I have still found a neutral liquid, have demonstrated to my mind, on the other hand, that the natural nasal mucus is frankly alkaline in ozæna, as I have observed it fifteen times in sixteen cases (vid. sup.). This is a capital difference, in view of the importance of the reaction of the medium for the vitality of the microbes. It is the same in regard to the consistence of the liquid, which is aqueous in the tampons, whilst the mucus of the ozæna is of a pathognomonic viscosity, and easily dries up to form the crusts which characterize this affection. If we remember, finally, that the air circulates freely upon the surface of the mucus, but could not penetrate a tampon soaked with liquid, a difference equally capital for the development of the microbes, it clearly results from the difference of the conditions under which we have been placed, M. Fraenkel and myself, that this author has not had before him the real and natural product of the ozænic action, but a sort of culture instituted under peculiar circumstances and artificially complicated, whilst my researches have simply borne upon the mucus as it is produced by the mucous membrane of the ozænous subject.

The divergence of the result of a culture on the one hand, and the product of the disease itself on the other, stand out distinctly when one attempts to multiply the characteristic microbe of ozæna by sowing in *culture liquids* the mucus formed in this disease. I have planted, for example, in taking the necessary precautions, several ballons, some containing meat broth, others, Liebig's extract, diluted with water, with ozænous mucosities in which, even under the largest magnifiying powers, the large cocci were, in appearance, the only microbes present. The ballons and the liquids had been sterilized in a laboratory, especially intended for bacteriological researches. Contrary to my expectation, the result has always been, not the exclusive multiplication of the large coccus, but the predominant appearance of a host of other microbes, resembling a little those found by M. Fraenkel, and among which the small micrococci above all were abundant and active. Later, some molds floated upon some of the cultures of Liebig's extract. Attempts at culture upon sterilized slices of potato have not been more successful.

None of the attempts to cultivate the special coccus having succeeded, I am experimenting at present with the materials of culture employed by M. Koch, peptonized gelatine and agar-agar, by aid of which, especially of the latter, I have, in fact, succeeded in obtaining pure cultures, containing only the large coccus, by sowing therein fragments of the mucus filaments which were almost composed of cocci (see above). I am trying at present to *inoculate* animals with the product of these cultures with the object of communicating ozæna to them. The experiments of this kind which M. Fraenkel has attempted, however interesting they may be, have been made with the liquid of the tampons, consequently, according to that which I have just demonstrated, with the product of a special culture containing a host of micro-organisms, in preference to the microbe, which is, in my opinion, the characteristic organism of ozæna. In the liquids contained by the tampons and in the artificial cultures—in those, for example, made with broths—there takes place, I think, a sort of selection which I explain thus: The nose receives, as I have above stated, all the germs present in the atmosphere. In the peculiar conditions of ozæna, that of the special microbe alone develops; in the artificial cultures, on the contrary, there exist other conditions of nutrition, of acration, etc. Conformably to these latter, other germs, smothered in the nose by the coccus in question, are developed to the exclusion of the latter. Something similar takes place, likewise, in the liquid of the tampon, and I can say, as far as concerns this matter, that I have observed myself in the nasal mucus, after the use of the tampon, besides the coccus of ozæna, the presence of small, immobile bacilli, which I had not found before this application.

Besides the fluid extracted from the tampons, M. Fraenkel has also examined directly the ozænous nasal mucus, but as far as his publications show (loc. cit.), only upon the cadaver, and, consequently, under conditions altogether unfavorable to the investigation of the micro-organisms. Whilst *in vivo* their development is constantly influenced and modified by the mucus secreted in a continuous manner. The *post-mortem* decomposition can only yield the results of simple putrefaction.

### THE PHARYNX.

In all my ozænous patients I have seen the pharynx, nasal and buccal, covered with elevations alternating with furrows. The microscopical examination of the mucus of this region has given me different results from those obtained upon the pituitary membrane, in that the cocci present were much fewer in number and mixed with a great variety of other objects, especially with epithelial cells. I have also found in it, in one case, some very singularly formed elements, which it will be necessary to study hereafter.

According to all that precedes, *ozæna is an affection sui generis*, characterized not only by a peculiar atrophic deformity of the nasal fossæ and a decomposition with fœtid products which are not met with, either the one or the other, in any other affection, but also by the presence of a special coccus. The presence of the latter alone causes the characteristic odor which its absence excludes. Thus, the stagnation of the muco-pus in other nasal affections, in which, be it understood, this coccus is wanting, causes no bad odor, at least not that particular fœtidness (for example, in chronic coryza, mucous polyps of the nose, and adenoid tumors of the pharynx) among children who can not or do not know how to blow the nose.

*Is the microbe absolutely proper to the nasal fossæ*, and is it not found in other regions? It is impossible to answer this question at the present time. As far as regards this subject in general, I think that it is often wrongfully claimed that the microbes met with in certain affections are considered as particular species. It seems to me possible, on the contrary, that the same micro-organism may either cause identical disorders in different organs (disorders which we do not recognize as identical, and which we are accustomed to designate differently, according to the localities attacked), or provoke in different parts of the body, troubles differentiated by the conformation of the organs, their circulation, their secretion, the access of air, the temperature of the region, etc.

To resume, finally, my idea, *this is how I regard the rôle of the coccus in ozæna.* I think that in the normal state the mucus fixes all the germs brought by the air (as glycerine does, for example, in certain aeroscopes), but does not constitute a medium favorable to their multiplication. I am able to affirm this fact, after repeated examinations of the normal nasal mucus in which I have never met with abundantly developed microbes. A pathological change is necessary in order to permit such or such a germ to pullulate and to exercise an injurious action. It is thus in ozæna; through the effect either of a peculiar conformation of the nasal fossæ, or, of a special modification of the secretion, the coccus carried by the inspired air is enabled to multiply itself upon the membrane of Schneider. Meeting with favorable conditions, it prospers to the exclusion of all the other microbes, for, when several species of the latter invade a region, a single one of them generally predominates, because it finds the best conditions of development.

I am inclined to think that the coccus of ozæna must proceed from another nose attacked by this disease, and that in general the germs are obliged to pass through a pathological medium in order to require special pathogenic properties.

The coccus pullulates then, smothering out all the other germs, and causes the nasal secretion to undergo the characteristic decomposition. To demonstrate that it requires special conditions, in order to give it the victory over the other microbes, I have only to recall the fact that, when one attempts to artificially cultivate, in certain media, the ozænous mucus which, under the microscope, appears to contain the coccus exclusively, the latter does not multiply, whilst other germs—invisible until then, but, be it understood, equally present before and only smothered by it—are alone developed, this medium permitting them to predominate over the coccus of ozæna (veal broth, Liebig's extract and sterilized potato).

The conditions of pullulation of the coccus are found realized in a complete manner in the nasal fossæ of the ozænous patient, less so in his pharynx, for I have found the microbe more rarely in that quarter, and probably still less in the Esutachian tube; I conclude thus because of the rarity of affections of the middle ear in ozæna, a point upon which I shall have to speak hereafter.

Once established in the nose, the coccus invades the mucous membrane and also, I think, the osseous sub-stratum of the turbinated bones, causing atrophy of these parts.

## THE GENERAL CONDITION OF OZÆNOUS SUBJECTS.

The health of persons attacked by ozæna is generally indifferent, and I have always noticed in them an unhealthy appearance and a pale complexion. I have been struck, above all, by the paleness of persons with ozæna. According to my opinion, this deterioration of the health proceeds not only from the incessant aspiration of the gaseous products of the ozænous decomposition, but also from the deglutition of its non-gaseous products, among which there are certainly some very injurious. This fact, which I do not remember having seen mentioned, is proven to my satisfaction since I have observed the pressure of the coccus in the mucosities which cover the posterior wall of the pharynx and which are assuredly swallowed from time to time.

### THE CONTAGIOUSNESS OF OZÆNA.

As I said above, I think that the coccus must proceed from an ozænic nose; my hypothesis is closely connected with that of the contagiousness of ozæna, admitted by some authors. Thus, M. Bossowski cites the case of a young girl eighteen years of age, in whom the disease had declared itself a few weeks after cohabitation with an ozænous subject. The last case of ozæna which I have just observed, concerns likewise a young woman twenty years old, mother and wet nurse, who had become ozænous only within the last few months. The extremely flat nose of this person presents interiorly all the characteristics of the most confirmed ozæna, atrophy of the turbinated bones and of the mucous membranes, adherent crusts, abundant cocci, etc. According to the account of the patient, the father of her child, a young man whom she had lost sight of, was free from all nasal or syphilitic disease; so that the origin of the disease remains obscure in this case. Moreover, in studying the question of the contagiousness of ozæna, the information given by patients of the character of the one I have just mentioned, ought, in my opinion, to be received with much reserve, in view of the little attention that certain individuals pay to questions which seem to them to interest the health less than coquetry and attention to cleanliness.

If contagion is operative, this certainly takes place through the microbe; but even the latter must find a ground favorable to its establishment, a condition which we must admit for the propagation of all contagious or infectious diseases. For ozæna particularly, this necessity seems to me clearly shown by the rarity of the affection, whilst the opportunities for its propagation are innumerable; thus, for example, we very often see in a numerous family one child alone attacked with ozæna, in spite of the intimate and constant contact of little children with each other during their plays and with their parents, and the promiscuous use of handkerchiefs in childhood. I have in my clientèle a family in which, among several children of both sexes, two young girls alone are ozænous; the younger to an advanced degree, the eldest apparently so slightly that her ozæna was only discovered by me at the time of the inspection of her nose, the mother having apprised me incidentally that the eldest sister was affected with absolute anosia. And yet the examination disclosed all the signs of ozæna, enlargement of the nasal fossæ, with diminution of the volume of the turbinated bones, fœtidness, formation of crusts, and, above all, innumerable voluminous diplococci. It is to be remarked that, of all the members of the family, these two sisters, who moreover resembled each other very much, alone had flat noses. It is impossible to decide here whether the affection had been communicated by one sister to the other, or whether it had manifested itself in each one of them independently, by reason of the vicious conformation of the nose, a congenital disposition which might have favored the invasion of the microbe.

As far as concerns contagion in general, it is perhaps necessary, in order that it may take place in this affection (and in others) that the micro-organism shall have but recently left the medium in which it took its origin, whilst it would lose its special pathogenic quality by sojourning in media unfavorable to its pullulation. In other words, it might be that it was necessary that the coccus should reach a nose still intact—but disposed to ozæna—a little while after its escape from the organ which has given birth to it, whilst there would be no contagion from a wandering germ, and one that had sojourned en route. This is, perhaps, also one of the causes of the rarity of the disease.

## DENOMINATION OF OZÆNA.

It has been recently proposed to change the name of ozæna and to substitute for it that of " Rhinitis chronica atrophicans fœtida." But ozæna, being well characterized by all the signs that I have just exposed, I see no utility in changing the name. To be exact, one may add the epithet "simple" or "true," in order to exclude the only confusion possible, that with syphilitic ozæna. As to the name of " Rhinitis," etc., besides this being rather a definition, the word "atrophicans" seems to me of doubtful latinity, without counting that it is not the rhinitis which is fœtid, but its product!

## COMPLICATIONS.

According to my experience, and contrary to the accepted views, ozæna is never complicated, so to speak, with auricular affections. I have observed them only in about one-twentieth of the patients attacked with ozæna whom I have treated in an otological practice of twenty-two years. There exists, in my opinion, no relation between these two kinds of disease. I will say, upon this occasion, that I have scarcely ever seen diseases of the ears attributable to the presence of mucous polyps in the nose, unless there coexisted adenoid vegetations of the nasal pharynx (a combination that I have just seen, among others, in a boy eight years old, born of a syphilitic father).

There are, then, two nasal affections producing most important results, and I add, the most opposite as regards the respiratory function of the nose, for the one absolutely obstructs the nasal fossæ, whilst the other, on the contrary, enlarges them to excess, and both remaining without effect upon the drum of the tympanum. It seems to me, after that, that there is much to reconsider of the supposed action of certain nasal affections upon the middle ear. The rarity of auricular troubles in cases of mucous polyps, which more than any other disease causes complete obstruction of the meati of the nose, pleads also against the hypothesis of M. Lucas concerning the injurious effect of the obliteration of the nose upon the middle ear by the aspiration performed during deglutition.

I think that at the very time that this action takes place, a healthy Eustachian tube allows instantaneously of the establishment of an equilibrium.

As to ozæna, the immunity of the middle ear in this affection is so much the more interesting to remark, as, in consequence of the atrophy of the inferior turbinated bone, the orifice of the tube is found more directly exposed to the inspired air, and is bathed, besides, by the mucosities in which I have demonstrated the existence of the characteristic coccus.

### SYMPTOMATOLOGY AND DIAGNOSIS.

I shall not speak of the crusts or of the fœtidness, or of the character of the atrophy which render confirmed ozæna easy of recognition. I will add to the recognized signs only the evidence of the coccus upon microscopic examination, and a few phenomena of less importance that I have met with in many cases. There is at first a peculiar *nasal tone*, which appears to me due to the resonance of the sounds of the voice in the greatly enlarged nasal fossæ. I have already mentioned the filaments of mucosities which I have constantly seen stretched between the turbinated bones and the septum; I have likewise frequently observed muco-purulent masses lodged above the middle turbinated bone. These two phenomena, if they are not exclusively proper to ozæna, have seemed to me, nevertheless, more constant here than in other nasal affections.

We are going now to inquire whether the knowledge of the nature of the coccus can be useful to us in the diagnosis of ozæna. It will be so, above all, for the recognition of this affection at its commencement and in doubtful cases.

I hope that, thanks to the discovery of this micro-organism, we will be able first to decide whether ozæna always begins by a hypertrophic stadium, a chronic coryza, or not. This question is still in dispute, some of the best authors answering it in the affirmative; others, not less competent, negatively. Be that as it may, those who even admit the hypertrophic stadium, do not say how one could recognize the affection at this period. Ah, well! the knowledge of the nature of the coccus enables us to settle the question. I advise seeking for it, with this view, and following the subsequent phases of the disease. I have already been able to proceed thus in one case, and I am commencing analogous researches in others; but it will be readily understood that I cannot yet offer any definite results, these observations naturally having to embrace some years.

If my previsions are correct, the coccus will serve to enable us to recognize ozæna at an early hour, and we will be able then to try to combat this affection under conditions more favorable than has been possible up to the present time.

If the future alone can decide upon the value of the coccus as a means of diagnosticating ozæna at the commencement, it is not the case as to the second point, for I have already been able to utilize the knowledge of the microbe in the doubtful cases which present themselves quite frequently to the specialist. There are, in the first place, veritable cases of ozæna, but with little fœtidness and a moderate enlargement of the nasal fossæ. There, the microscope has decided me as to the nature of the affection by demonstrating the existence of the characteristic microbe. On the other hand, I have been able to exclude ozæna by the absence of the coccus, in cases of chronic rhino-catarrh with enlargement (certainly congenital) of the cavities of the nose, but without atrophy, an important result which has enabled me to reassure my confrères and the families of the patients as to the future of the latter. Besides that, I have had occasion to see several cases of doubtful nasal affections, in syphilitics, or persons suspected of being such. In all those cases I have found the coccus, and the subsequent progress has confirmed the diagnosis of simple ozæna.

The knowledge of this microbe would have been very useful to *M. Zaufal*, in establishing a certainty in the following case: A young woman, suffering with ozæna, came to consult him, accompanied by her child. Finding that the latter had a nose shaped externally like that of its mother, M. Zaufal examined it, and found that the nasal fossæ already had, "so to speak *en germe*," the same disposition as those of the mother, and "that at puberty" (sic) the child would certainly have ozæna. (I do not know why the learned specialist of Prague insists upon puberty, for I have very often seen ozæna in little children, among others in the little girl, at present eight years of age, whose case I have cited on page 844, and who has already been ozænous for several years.) If M. Zaufal had known the coccus, the microscopical examination of the nasal mucus of the child would have demonstrated to him the presence or absence of the microbe, and, consequently, the existence or non-existence of ozæna.

## THERAPEUTICAL APPLICATION.

*From the discovery of the microbe is derived the indication to energetically apply a parasiticidal action ;* it is necessary to attack the cocci present, to remove as many as possible, and to kill those that remain, or at least to destroy their vitality to the degree of preventing their multiplication and their decomposing action. With this view, I apply antiseptics by means of a combined treatment, which is composed of three procedures, employed daily upon each patient attacked with ozæna. We are going to pass them in review one after the other.

1st. *The nasal douche.*—I cause it to be used with the solution of one of the best microbicides known, bichloride of mercury. I commence with one part of sublimate to nine or ten thousand parts of water, and increase the strength in proportion as the patient tolerates it. The douche is very easily employed in ozæna, because of the excessive amplitude of the nasal conduits, peculiar to this affection. I have insisted, in several articles, upon the utility and the harmlessness of this procedure, as also upon the mode of using it, and upon the necessity of well instructing the patient, or the person charged with treating him, as to the mechanism of this injection, before entrusting him with the execution of it.

It is not necessary to dwell upon the importance of these admonitions, when they concern a substance as poisonous as corrosive sublimate. I will add, incidentally, that I find it useful with many persons to cause them to pronounce the vowel *â*, in order to keep the veil of the palate elevated during the douche.

This manipulation, indispensable as it is, does not suffice, however, alone for applying the medicament to the whole interior of the nose, for it does not cause the liquid to penetrate into the upper parts of the nasal fossæ, without employing a pressure and giving to the head of the patient an inclination capable of causing the neighboring cavities (above all the drum of the tympanum) to incur risks out of proportion to the therapeutical results to be obtained. To remedy this inconvenience, I add:

2d. The *nasal bath*, which is performed in the following manner: After having finished the douche, the patient inclines the head backward until the two nostrils form the highest points of the nasa-pharyngeal cavities. Whilst then he continues, in this attitude, to gently fill the nose by introducing the solution of sublimate by one nostril until it escapes by the other, at the same time breathing through the mouth or saying â (in order to keep the veil of the palate elevated), one is sure that the nasal fossæ are completely filled, conformably to the law of communicating vessels. By means of the two procedures which I have just described, a large part of the cocci with the mucus containing them is removed, and the vitality of those which remain is strongly attacked, but the action is only fugitive. I employ, then, conjointly with the preceding manipulations, a third procedure.

3d. After the douche and the nasal bath, the daily treatment is terminated by *insufflations of impalpable powder of boric acid.* It is necessary to proceed with great care in order to distribute the powder equally over the whole interior of the nasal fossæ and of the upper pharynx (especially when there exists a strong deviation of the partition), and in order to reach these cavities only. To localize the insufflation thus, while I am practicing it, I cause the patient to sustain the vowel â in order that the veil of the palate may remain elevated and prevent the powder from falling into the larynx. I recommend this little stratagem for the insufflation of powders into the nasal fossæ in general; it is, above all, indispensable, when it concerns the application of more active substances, nitrate of silver, for example, the fortuitous penetration or deglutition of which into the larynx must be absolutely avoided. I do not know if other authors have thought of this precaution, which I believe to be important.

The object of the insufflations of boric acid is to establish, upon the walls of the cavities of the nose and of the nasal pharynx, *a reserve or provision of an antiseptic substance*, dissolving in the mucus in proportion as it is secreted.

I select *boric acid* because of its well-appreciated harmlessness, among others in ophthalmology, and of its excellent microbicide action. This latter is, in my opinion, more energetic than would appear from the tables prepared by MM. Buchholtz, Miquel and other savants. Here is, apart from the excellent practical results, which this substance has always yielded me, the *reasoning* that I use to explain its therapeutic action. It is not necessary to judge of the antiseptic power of a substance exclusively by the rank that it occupies in experiments *in vitro*, but to consider likewise, when we are dealing with applications to the animal organism, in what concentration it is borne. Upon this evidently depends the dose in which and the length of time during which it may be employed; the tolerance of the tissues being very feeble for substances which far surpass boric acid in the tables of those savants; whilst it is, so to speak, infinite for this last-mentioned article, it follows that enormous quantities of it may be employed. One may even store it up in fine powder in those organs whose conformation permits it, for example, the auditory canal, and, in case of perforation, the drum of the tympanum. (I will add, in passing, that I have been much gratified in prescribing the same product in powder to combat other decompositions, for example, the fœtid perspiration of the feet and in the axillæ.)

Thanks to a greater tolerance on the part of the organism, a substance considerably less antiseptic than another, according to the experiments *au ballon*, may then, when it concerns a therapeutic aim, succeed much better than a substance more active *in vitro*, but badly borne by the living tissues. Moreover, in trying to utilize in surgical practice the experiments concerning the action of bactiricidal substances upon putrescible liquids, such as broth, it is necessary, also, to take into consideration the resistance of the living histological elements to the microbes, which certainly aids the animal body in its struggle against these invaders.

To return to the treatment of ozæna, the patients attacked by this affection do not generally present themselves to the physician until the pathological work is already consummated, and an attenuated mucous membrane clothes the atrophied bones. At this stage, one would no longer think of energetically attacking the pituitary membrane in order to modify the secretion from it, or even of trying to suppress it entirely. But we ought to attempt doing something in this direction at the commencement of the affection; the treatment which I have just described will succeed, I hope, in preventing the advent of the final pernicious period of the disease. There will still be a possibility, in this primary stage, of acting vigorously upon the mucous membrane by means of the galvano-cautery, (especially of the cautery with a lateral action, devised by myself to avoid injuring the septum), as I have already recommended at the Congress in London. To dare to undertake this energetic treatment, it will necessarily require the ability to recognize ozæna at its commencement, a thing impossible up to the present time, but which will be possible, thanks to the discovery of the coccus, as I have demonstrated above.

To finish the therapeutical exposition, I will add one more item of advice, that of causing the handkerchiefs of the patients to be frequently changed, the products of the secretion continuing the work of decomposition outside the body (as in the socks of hyperhydrotic feet). I could cite, in this regard, the example of a lady of the wealthy class, who was obliged to burn her handkerchiefs, which no one was willing to wash.

### THE RESULTS OF THE TREATMENT.

The plan of treatment which I have just explained gives excellent results by preventing stagnation of the secreted masses and their decomposition by the coccus. This method is, moreover, not only more certain than the treatment by the tampons, of which I have spoken above, but also infinitely more cleanly, especially for those who live with others, the patient not being obliged, as with this last procedure, every day to remove the plugs of cotton saturated with a repugnant liquid. The future will decide whether, above all at the beginning of the disease, there is reason to hope for an absolute cure by *my method* which I am not able yet to affirm. *The truth is that it secures not only the disappearance of the fœtidness, and thereby the possibility of restoring the patient to society, but also, and which is something entirely new, a surprising improvement of the general health.*

I have spoken above, of the pallor, in my view, characteristic of the subjects of ozæna, and of the unsatisfactory general condition; well, after a certain length of time, this treatment gives them a fresher complexion, and a greater vitality. I think that this improvement in the general health is due to the fact that the patients no longer aspire (or more probably swallow) the injurious products of the ozænic decomposition of the nasal mucous, which is prevented by this treatment after it has once been instituted, and as long as it is maintained.

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## SELECTIONS.

### The Debate on Cholera at the Royal Medical and Chirurgical Society.

The practical interest felt in England in cholera was very well evidenced by the large attendance at the debate at the Royal Medical and Chirurgical Society, on Tuesday, March 24th, and by the marked attention given to several long and important speeches. Dr. George Johnson opened the debate in a speech of nearly an hour, very clearly explaining his now well-known pathological teachings as to the production of the state of cholera collapse by the spasm of the pulmonary capillaries under the irritant poison of the disease. This was the central fact that he gathered from the *post-mortem* examinations. He had much to say on treatment, but the causation of the disease he left to others. Dr. Klein, taking up this latter part of the subject, gave the society the benefit of his recent Indian experience, and argued, with some force and confidence, against the existence of any such specific comma-bacillus as Koch has described as the cause and agent of cholera. His arguments were carefully examined and criticized in detail by Mr. Watson Cheyne, who had had some opportunity of studying cholera in Paris last summer, and had taken up Koch's views, though with some cautious reservations. The society repeatedly showed its sense of obligation, both to the observer and the critic. As there were many others anxious to speak, a special meeting at 8 P. M. was arranged for Tuesday, March 31st, when it is hoped it may be found possible to conclude the debate. On Monday and Tuesday, 23d and 24th, Professor Warden, of Calcutta, who had specially come over from Dr. Koch's Laboratory of Berlin, exhibited at the rooms of the Royal Medical and Chirurgical Society an excellent series of specimens, showing the cultivations in various media of the comma-shaped bacilli. Among the most interesting of these were specimens of mixed cultivation on plates, on which these various organisms, which were growing together on the same plate, could be discriminated easily by naked-eye characters.—*British Medical Journal, March* 28, 1885.

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It is a matter for regret that the discussion of the etiology of the disease, at the Royal Medical and Chirurgical Society, was not fuller; it has failed in this, chiefly owing to want of time. The great length to which the President of the society felt it necessary to review the whole subject of the etiology, pathology, and treatment of cholera, trenched so much on the short time available, that at the first meeting there was no opportunity of hearing more than Dr. Klein's exposition of his views, and Mr. Watson Cheyne's very able defence of Dr. Koch's position; unfortunately, the hour was then late, and the meeting too weary to listen long to Professor Warden, of Calcutta, who had come over from Dr. Koch's laboratory at Berlin; Sir Joseph Fayrer could say but a few words; and Professor T. Lewis, whose views would have been heard with interest, was unable to speak. Professor Warden, however, was able, on March 23d and 24th, to give a most elaborate and interesting demonstration of the mode of growth of various comma-shaped oganisms, and of Dr. Koch's methods, and thus achieved the main object of his mission.

The question which is now so hotly debated, whether the comma-bacillus of Koch has any essential part in the production of cholera, involves many considerations of much complexity. In the first place, it has been urged that it is not a distinct species. Dr. Koch and many other competent observers contend that the general behavior of the bacillus in cultivations, the nature of the material in which it grows best, and the phenomena which it produces in it, its characters in tubes or on plane surfaces of nutritive gelatine and on potatoes, together with its morphological features, complete a picture which is quite distinct, and serves to separate it as a distinct species from all other bacteria. This question can only be settled by specialists in mycology; the positive evidence is very strong, and must have great weight. Granting that the bacillus is a distinct species, we have next to inquire whether it is pathogenic; and the question at issue between the German and the English Cholera Commissions has now been practically narrowed to this—practically, for it may still be contended that the comma-bacillus is not a species, but a variety, or sport. At present, it must be admitted that, however probable this latter view may appear on general grounds, there is no evidence from analogy to support it, and it has not yet been worked out with regard to the comma-bacillus itself.

Those who support the view that this bacillus plays some essential part in the production of cholera are driven, in the absence of trustworthy results from experiments on animals, and in the absence of epizootic cholera, to a line of argument admittedly less sound than that which has been used to establish the pathogenic nature of the bacilli of anthrax, tuberculosis, or glanders. This particular species of organism has always been found in the acute stages of Asiatic cholera when looked for by competent observers; it has not been found under other conditions; and Dr. Koch states that it is present in great numbers in the ileum, and that cultivations made from the ileum shortly after death in acute cases yield cultures which are almost pure; this we understand to be the true meaning of the somewhat ambiguous statement which has been very commonly interpreted in a somewhat different sense. Dr. Klein joins issue both on this point and on the further statement, that the bacilli penetrates the mucous membrane. His observations on these most important points require the gravest study. The question in dispute is one of the first consequence, as upon it the decision must largely hinge, unless, indeed, Dr. Koch has some further surprise in store with regard to experiments on animals.—*British Medical Journal, April* 4, 1885.

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THE SURGERY OF PYLORIC STENOSIS.—An important contribution to the operative treatment of carcinomatous and fibrous obstruction of the pylorus may be found in the *American Journal of the Medical Sciences* for April, in which the author, Dr. Winslow, of Baltimore, has collated nearly all the examples that had been recorded up to February 9, 1885, of pylorectomy, and its substitutes, gastroenterostomy, gastrectomy, gastrostomy, duodenostomy, and digital divulsion of pylorus. In all, he has collected 61 excisions of the pylorus, including 1 of his own, 13 gastroenterostomies, 1 gastrectomy, 1 gastrostomy, 3 duodenostomies, and 6 examples of digital divulsion; and he has given a most satisfactory résumé of the indications for, prognosis of, causes of death after, and technique of these different procedures. In the present article, we propose to draw some conclusions as to the justifiability of these operations and their comparative value, availing ourselves not only of the material furnished by Winslow, but of 8 additional examples of pylorectomy from the practice, respectively, of Kuester, Czerny, Lauenstein, Schede, Koehler, and Rydygier, 2 jejunostomies by Surmay and Robertson, 2 pyloric divulsions by Loreta, referred to by Holmes in the *British Medical Journal* for February 21, 1885, and 1 gastroenterostomy by Rydygier, the details of which, as well as of 3 new pylorectomies by that surgeon, may be found in the *Deutsche Zeitschrift für Chirurgie,* Bd. xxi., Hefte 5 and 6, 1885.

1. Carcinoma of the Pylorus.—The operations that have been practised up to the present time for carcinomatous stenosis are pylorectomy, gastroenterostomy, gastrostomy, and duodenostomy. The single case of extirpation of the entire stomach need not detain us, as there is no probability that it will be repeated.

Pylorectomy has been resorted to at least 60 times, of which 45, or 75 per cent., succumbed—29 from collapse, 6 from peritonitis, 4 from gangrene of the transverse colon, 2 from inanition, 1 from exhaustion, and 3 from undetermined causes. Of the 15 survivors, 5 died subsequently of recurrence, respectively, at the expiration of three, four, ten, eleven and a half, and nineteen months; 2 were living with recurrence, respectively, at eighteen months, and three years and nine months; the disease recurred in 1 in eleven months, and Socin performed a gastroenterostomy, the patient being alive at the end of four months, the date of the last report; 3 patients were alive without recurrence at the expiration, respectively, of two, seven, and eleven months; and in four the fate is uncertain. In other words, of 56 cases in which the result is known, 75 per cent. perished as the direct result of the procedure; in 72.72 per cent. of the survivors there was a return of the disease; and in 27.27 per cent. there was freedom from recurrence for less than one year. Hence, not a single patient was permanently cured, that is to say, remained free from recurrence for three years. These facts are quite sufficient to condemn the operation, and the opinion that it is unjustifiable is rapidly growing.

Gastroenterostomy, a procedure devised as a substitute for excision of the pylorus when the latter is rendered impracticable by adhesions or the extent of the disease, has been performed 11 times, with 3 recoveries and 8 deaths, or a mortality of 72.72 per cent. Of the survivors, 1 died in four months, and 2 were still alive at the expiration, respectively, of two and four months. As the mortality is nearly as great as that of pylorectomy, and as the cases in which the operation has been practiced were more serious those in which pylorectomy was done, death in a short time being inevitable without any operation, it is obvious that gastroenterostomy is not destined to become a recognized procedure.

Of gastrostomy and duodenostomy, little need be said. Hahn succeeded in prolonging life for two weeks by opening the stomach and feeding the patient through a tube passed into the duodenum; while Langenbuch's case of the establishment of a duodenal fistule for the purpose of feeding, died on the seventh day of inanition.

The frightful mortality of all the operations of which we have presented statistics, the almost inevitable recurrence of the disease, the failure to have effected a single permanent cure, and the slight knowledge which we possess of the extent to which nutrition can be sustained by intestinal digestion alone, are in our opinion, grave objections to operative interference in carcinoma of the pylorus. Hence, we believe that such cases should be left to their fate, suffering being palliated by anodynes, and nourishment being afforded by the rectum.

2. Fibrous Obstruction of the Pylorus.—The operations that have been done for fibrous stricture of the pylorus are pylorectomy, gastroenterostomy, duodenostomy, jejunostomy, and digital divulsion.

Excision of the pylorus has been practised in 9 cases, of which 5 recovered, and 4, or 44.44 per cent., died, the causes of death having been peritonitis in 1, collapse in 1, and gangrene of the transverse colon in 2. The survivors were doing well, respectively, at the expiration of one month, three months, six months, and nearly three years.

Gastroenterostomy has been done 3 times, with 1 death from collapse, and 2 recoveries. Of the ultimate fate of the survivors we have no information.

Duodenostomy has been resorted to by Southam in one case, the patient dying from inanition on the third day. Surmay and Robertson lost their patients after jejunostomy, respectively, at the end of eight and thirty hours, so that these measures have proved to be useless.

Digital divulsion of the stomach, as first done by Loreta, has been practised in 8 cases, of which 6 recovered, and 2, or 25 per cent., died of collapse. Of the survivors, 1 was doing well on the third day, and the remainder had perfectly recovered, their digestion being normal, and there being not the slightest evidence of recontraction. In three cases, indeed, eighteen, twenty-four, and twenty-seven months had elapsed since the operation.

From the above facts, we think that the conclusion is warranted that Loreta's operation should be preferred in cases of cicatrical stricture of the pylorus. It is far less fatal than pylorectomy, is much more easy of execution, it exposes the peritoneal cavity for only a comparatively short period, and it does not sacrifice a portion of the stomach. We may further conclude, with Winslow, that when digital divulsion is impracticable from the great thickening of the walls of the pylorus, resection is indicated in those who are well nourished, and that gastroenterostomy should be resorted to in greatly debilitated subjects.

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In connection with the operative treatment of pyloric stenosis, attention may be called to an entirely opposite method of treatment carried out by Dr. Russell, of Birmingham, and recorded in the *British Medical Journal* for February 21. In a man, now aged 55, suffering from a stationary constriction of the pylorus with great dilatation of the stomach, washing out the organ, through which every impurity which would act as a ferment was removed, succeeded in restoring the digestive powers and in sustaining a useful existence for five years, the patient being still alive. If further experience with this treatment should prove it to be as valuable as in the case of Dr. Russell, Loreta's operation should not be undertaken until irrigation has had a fair trial.—*Medical News, April* 11, 1885.

## NERVOUS EXHAUSTION AND FATAL SHOCK FOLLOWING LABOR. By GEO. J. ENGELMANN, M. D.

The progress of the obstetric science has equipped the obstetrician so well that he can now with safety predict the favorable termination of any case of labor, whatever its difficulties may be, and if the malformation of the child or of the pelvis of the mother makes delivery of the living offspring impossible, the mother at least can be carried through the labor with perfect safety. In this country, so blessed with healthy women, free from deformity of the pelvis, easy, normal labor is so common, and the obstetrician is so well prepared to meet whatever difficulties may arise that he is inclined to look lightly upon labor. Occasionally, however, there is a rude awakening from this feeling of safety, and the calamity, when it does occur, is a terrible one. As a caution to others I will relate a sad case which recently occurred in my practice.

A friend requested me, on account of his temporary absence, to attend a patient of his in confinement. "She is a healthy, young country-woman," he said, "and she will have a very easy labor."

On the evening of February 3, I was called to see Mrs. H., a primipara, aged 24, who had recently moved to the city from the interior of the State. Mrs. H. had been married some four years, was rather stout, of an excessively nervous disposition, with a very weak stomach, dyspeptic, and suffering intense agony during the menstrual period. The gastric disturbance was greatly aggravated during pregnancy, and though her stomach was very weak, her appetite was never affected. Arriving at seven o'clock in the evening I found that labor pains had commenced and the patient was suffering intensely; excessively nervous, the head presenting, no bag of waters to be felt; the os was dilated to about the size of a ten-cent piece. I left some Dover's powders and bromide of potassium with chloral; called again at ten; the suffering had increased, the patient tossing about. The stomach would not bear the quieting remedies given; hypodermic injection was not attempted, as morphine was said to affect Mrs. H. very badly; hyoscyamus and bitter alum was tried, but the stomach refused everything. Labor progressed very slowly; no liquor amnii being present, the head pressed directly upon the os uteri. Toward midnight her suffering and excitement had become excessive. The os was but slightly dilating; injections into the rectum, and flaxseed tea in the vagina were tried, then chloroform was resorted to. Though the chloroform was given to almost complete anesthæsia, the suffering seemed hardly to diminish, being agonizing during pains, but continuing in the interval, the patient not resting quietly as is usual when chloroform is freely used; and instead of puffed face freely perspiring, as we commonly find it in severe labor, the face was ashy pale, cold, sunken. Rectal injections of chloral and bromide of potassium were tried, but were ineffective, not being retained. When the os was dilated to the size of about three inches the membranes were ruptured and a few table-spoonfuls of water came. The suffering was now excessive, so that relief was demanded, and as the os was soft and yielding, the forceps were used, as it seemed impossible with the peculiar formation of the parts that delivery could be affected by the natural forces. The vagina was narrow and rigid, the vaginal opening small, the anus appearing directly beneath it as a round hole in the tissues, there being only a thin septum separating vagina and rectum. There was no perineum present and no sphincter ani, but a mass of heavy tissue underneath the rectum. The form of the pelvic floor was so changed that the descent of the fetal head could proceed no further without artificial assistance. Unfortunately this discovery was made at rather a late date. I had undertaken the case for a friend, and, consequently, had not made a preliminary examination as is my habit; more especially so as I had been assured that an easy labor in a strong, well-developed country-woman could be expected.

The vagina was narrow; there was no yielding perineum, in fact the condition of the parts was so peculiar that the forceps were introduced with some little difficulty; this was further aggravated by the position of the child's arm around the neck; the head was grasped in the blades, and a medium sized, well-developed child delivered without difficulty, the thin recto-vaginal septum being, of course, torn to quite a depth. The child was asphyxiated by reason of the pressure of the arm upon the neck, but soon revived; pressure was kept up upon the uterus, which was still contracted, and after fifteen minutes the placenta was easily removed, being within the os uteri. The patient now rested quietly; the uterus was well contracted, and in order that I might repair the injured rectum, I hurried home, a distance of five squares, for my needle forceps at about 2 A. M. Upon my return, the nurse met me with the startling statement that the patient was bleeding freely. I found the uterus relaxed and some slight hemorrhage. There was no hot water at hand, so vinegar was called for, and the uterine cavity freely mopped, through a speculum, with cotton wads soaked in vinegar. With each application the uterus contracted, but again relaxed. A cup-full of vinegar was thus exhausted. By this time hot water had been prepared, and, with the assistance of Dr. Ameiss, an intra-uterine injection was made with a fountain syringe. At least a gallon of water at one hundred and twenty degrees was passed through the uterus by means of a double-current catheter. The uterus was again contracted. Dr. Ameiss held the uterus compressed within his hands, which were chilled with cold water. Notwithstanding the constant pressure and friction, the organ again relaxed, though no bleeding occurred. By this time subsulphate of iron had been obtained, and applied to the cavity, as the vinegar had been applied previously by means of wads of cotton soaked in the fluid, and perfect contraction at once followed, but the muscles would again relax. Electricity was now tried; one pole of the constant current within the uterine cavity, the other over the fundus on the abdominal walls. The muscle readily responded, but soon, after the pole was removed, it again relaxed. As there was not the slightest hemorrhage, and, at least, moderate contraction, internal applications were no longer made, but the hand was kept upon the fundus. The patient, who was very feeble, was given stimulants, but seemed to sink slowly. Hypodermic injections of brandy were given and heat applied externally. Dr. Baumgarten was also summoned. Ether was injected hypodermically, but notwithstanding all our efforts, the unfortunate mother continued to sink, dying at half-past eight o'clock, A. M.

The fatal termination was due to the intense suffering in this nervous, hyperesthenic system, while the agony of ordinary labor was greatly increased by the peculiar formation of the parts; and it was now learned that an accident necessitating an operation in the recto-vaginal space had occurred in early infancy, and that ever since the patient had been unable to control her stools if at all soft.

The amount of blood lost in post-partum hemorrhage was comparatively slight and of no consequence, except during the short period of my absence in search of a needle forceps. The weakened nervous system seemed unable to bear the excessive suffering of this unusual labor. A young, apparently stout and strong woman thus passing rapidly away during labor is, indeed, a sad reminder of how feeble science is, how absolutely powerless we are, if the system offers no resistance, if nature does not aid.—*Weekly Medical Review.*

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TONER LECTURE ON MENTAL OVERWORK AND PREMATURE DISEASE AMONG PUBLIC AND PROFESSIONAL MEN.—The ninth Toner lecture was delivered March 19, 1884, by Dr. Charles K. Mills. His subject, suggested by Dr. Toner, was "Mental Overwork and Premature Disease among Public and Professional Men." This lecture, in the form of a pamphlet of thirty-four pages, has just been published by the Smithsonian Institution. The longevity of intellectual workers in general is first considered, and is found to be above that of most other classes. The inferences and conclusions of the paper are largely based upon a study of sixty cases, especially collected by the author, cases in which loss of health or life had been mainly attributable to excessive brain work and brain strain.

These cases are arranged into two classes: (1) Men in political and official life, including cabinet officers, Senators, Representatives, department officials, Governors and candidates for office; (2) Professional men, including physicians, lawyers, clergymen, journalists, scientists and teachers.

The actual occupations were: Cabinet officer, 1; Senators, 8; Representatives in Congress, 10; department officials, 5; Governors, 2; candidates for important offices, 2; physicians, 6; lawyers, 7; clergymen, 2; journalists, 4; scientists, 6; teachers, 7.

Twenty-eight of the sixty, therefore, were men in political and official life, and eighteen of these were members of Congress.

The average longevity of men in the higher walks of political life in this country is regarded as considerably below the average of those who occupy similar positions in England. Comparing, so far as information was available, the ages at death of United States Congressmen and members of the English

Parliament, who have died since 1860, the following results were obtained: Fifty-nine United States Senators gave an average of 61 years; one hundred and forty-six United States Representatives an average of 55 years; the average of both being, therefore, 58 years. One hundred and twenty-one members of Parliament gave the remarkable average age at death of 68 years.

Taking twenty-five of those that might be regarded as the most eminent American statesmen of the last one hundred years, and comparing their ages at death with those of the same number of the most distinguished English statesmen, the United States gave an average of 69 years, and Great Britain of 70—no practical difference. It was noticeable, however, that much of the best work of the great English statesmen—of Palmerston, Derby, and Beaconsfield, for instance—had been done at an advanced age, when most American public men have ceased to do anything important.

The lecturer considers some of the causes which lead to mental overwork and break-down in American public and professional life, the early warnings of such overwork, and the forms of disease most likely to result. The preparation, qualifications and modes of life of American public men are discussed, and in some instances comparisons are made with English statesmen. The histories of many of the cases are briefly sketched. The special conditions which lead to overwork and its consequences among physicians, lawyers, journalists, scientists and teachers are presented at some length, with illustrative cases. The evil effects of competitive examinations and cramming, upon both teachers and scholars, in our public schools, are also described.

The symptom-groups and diseases represented by the series of sixty cases are summarized as follows: Acute neurasthenia, 18; insanity, 10; phthisis, 9; diabetes, 4; cerebral hemorrhage, 4; Bright's disease, 3; posterior spinal sclerosis, 3; pneumonia, 3; bulbar paralysis, 1; angina pectoris, 1; erysipelas, 1; hepatitis, 1; enteritis, 1; glossitis, 1. It was found almost impossible to present in orderly array all the symptoms which may be regarded as the indications of nervous exhaustion, and the probable precursors of premature disease from brain strain and overwork, these symptoms varying somewhat with the individual—with his hereditary tendencies, his habits and his surroundings. There were, however, certain common and positive evidences of existing or coming evil which were present in many cases.

Neurasthenia and lithæmia are discussed, and the most important conclusions are summarized as follows:

1. Intellectual work does not of itself injure health or shorten life, but mental overwork, particularly when associated with emotional strain, is a frequent cause of nervous break-down and premature disease.

2. The average longevity of men in the higher walks of public life is less in this country than in England. Politics here is not, as there, in the best sense a vocation; and our public men, in many cases, succumb to health, or fail to attain long life, because they go into careers unprepared, by inheritance, education, and training, for the severe demands to be made upon their powers.

3. Health and life are sometimes lost through forgetfulness of the fact that mental strain and overwork are particularly dangerous to those in middle life or advanced in years who attempt brain work and responsibilities to which they have not been accustomed. The effects of suddenly imposed mental strain upon these classes are especially disastrous.

4. If not subjected to unusual mental or physical strain, public and professional men, as well as those in other walks of life, although afflicted with organic diseases, may live in comparative comfort, and able to do a moderate amount of work for many years.

5. Among special causes of premature disease in public life are onerous and perplexing duties on Congressional committees, the uncertainties and disappointments attendant upon public positions, the great strain to which candidates are subjected during political campaigns, lack of recreation, and social excesses and abuses at the National Capital.

6. Among physicians, lawyers, and journalists, the performance of brain work under pressure for time, and under bad hygienic conditions, is a common cause of ill-health. Defective education and pecuniary harassments are also special causes of nervous break-down and premature disease among physicians and lawyers.

7. Comparatively few clergymen succumb completely to mental overwork, although many suffer from a mild but annoying form of neurasthenia.

8. The danger to the scientific worker usually arises from too intense and too prolonged activity of the mind in one direction.

9. The system of severe competitive examinations in vogue in many communities saps the health of both teachers and pupils. In our schools generally educational methods are bad, recreation is too much neglected, and unhealthy emulation too much encouraged. Education is not properly individualized.

10. Chronic neurasthenia is not common among men prominent in public affairs and in the professions. Such men are, however, sometimes the victims of a severe acute nervous prostration, which may result in serious organic disease.

11. Nervous strain is one of the causes of lithæmia, which is of not infrequent occurrence among public and professional men, but lithæmia and neurasthenia are not interchangeable terms.

12. The warnings of mental overwork and overstrain vary with individuals and circumstances, but certain psychical symptoms, and such physical symptoms as immobility of countenance, diminished resisting power, heart failure, sleeplessness, cervico-occipital pain or distress, and dyspepsia are of most frequent occurrence.

13. Insanity, particularly in the forms of melancholia and paretic dementia, is sometimes developed by brain strain and overwork. A family history of insanity is often present in such cases.

14. Phthisis, diabetes, and Bright's Disease are among other diseases most likely to be developed by mental overwork. Men in whose families phthisis is hereditary, should carefully guard against such overwork.

15. Overtaxing the mind and nervous system may be the exciting cause of almost any serious disorder to which chance, accident, imprudence or infection exposes the individual.

16. Many diseases, not nervous in their seat or manifestation, are developed directly or indirectly as the result of mental and nervous strain, through exhaustion, impairment, or lesions of the centres of the organic functions.—*The Polyclinic.*

## RESUME OF ORIGINAL ARTICLES

### IN OTHER JOURNALS.

ARRESTED AND DEFICIENT LACTATION.—In the *Atlanta Medical and Surgical Journal* for April, 1885, Dr. Henry F. Campbell, of Augusta, Ga., President of the American Medical Association, says:

A failure in the adequate supply of milk for the proper and entire nourishment of the infant is, in modern times, a not infrequent occurrence. Such deficiency is always disappointing to the mother, and often calamitous to the child, by impairment of its nutrition, as artificial substances cannot be made in all cases to subserve the ends of the ordained and natural nutriment. For such deficiency, existing in a greater or less degree, tonics, malt liquors, nourishing diet, and sometimes an oppressive amount of fluids, with perhaps warm and stimulating applications to the mammæ, are well known to be the staple resources of both the medical attendant and the experienced nurse. My own experience, as that of most practitioners, supplies a large number of deficient milk-supply, treated with varying results by these ordinary methods. Among my notes, however, there are two or three cases, one quite recent and others some years ago, in which the arrest of lactation was sudden and complete, after what had appeared to be a very satisfactory and full establishment of the flow. He then states the essential features of these cases.

*Case* I. Mrs. V. J. M., aged twenty years, in second child-bed, September 22, 1875. Her primapara had been with forceps—living child—lactation imperfect, the child sustained by the bottle, was feeble, and died in dentition. This second parturition natural, and there was a slight milk flow on the third day, continued scantily for one week, child being fed with the bottle. In another week the milk ceased entirely. Galvano-faradic mild current applied before bed time—one pole at nuclea and circle completed by hand on breasts for twenty minutes. The milk-flow became abundant during the night—"clothing drenched" by the spontaneous flows. The milk continued for a few days, but in uncertain quantities, and then ceased, to the bitter disappointment of the mother. The battery was again applied repeatedly, but causing no adequate supply, the patient became discouraged, and it was abandoned, as the child was doing well on the bottle.

*Case* II. Mrs. R. M. W., aged twenty-three years, was in her third childbed in 1878. Labor had been easy and natural. Lactation was fully and rather profusely established on the third day, and continued abundant for over a week. On one of his morning visits he was informed that she thought her milk had ceased to flow, that it had sensibly diminished for the past two days, and that now none could be obtained, and the child was being fed from the bottle. The breasts were, both of them, flabby, and both areolæ pale. The lochia were natural, and she felt no particular discomfort in the pelvic region. She was without fever, but had lost her appetite entirely, and had a depressed and melancholy look, and complained of slight frontal headache, the bowels and kidneys acting naturally; urine not tested. Mrs. W. had drunk freely of table tea and other fluids, hoping to recover her milk flow, without any result whatever. He directed warm fomentations to the mammæ and a weak sinapism to dorsal and cervical spine, with milk punch and continuance of the fluids. Finding no change on his call next day, and being at that time in frequent application of the battery to certain cases, he proposed the application of a mild electric current. Though somewhat startled at the proposition, she willingly submitted. The faradic current was made in the following manner: One pole of the battery was held in the hand of the patient, and the other in his own right hand, while with the left he completed the connection by alternately passing the hand over the two mammæ. The strength of the current was low, but could be gradually increased without complaint from the patient. It was continued for twenty minutes. She stated that "she had a more natural feeling in her breast now than she had for several days," and she evidently *expected* much from the unusual procedure. On calling the day after the application, she requested that he would apply the battery again, and stated that she had felt "the springing of milk" in her breasts, and nursed the child, and thought he had sucked a little milk. The application was made as before. A full flow of milk returned during the night. On the following day the breasts were fully distended, and to the end of lactation, there was no variation from the full and abundant supply which had marked her first nursing periods and that of her children born subsequently.

*Case* III. Mrs. B. E. F., aged twenty-one—first birth January 24th, 1885. Natural; no incidents during parturition; lactation established on third day in normal manner; nipple not well developed; and child nursing imperfectly, the breast became painfully distended. The breast-pump, and then a young puppy, was used to empty the breasts. The full flow continued four days. In one week from the birth of the child the milk began to fail. At the end of the next week it had entirely ceased. The mammary glands were hanging, shrunken and soft, at which the lady seemed more annoyed than at the loss of the milk. He applied, as in the above case, the electric current from one of Jerome Kidder's batteries. The application lasted twenty minutes to a mild degree. The patient within an hour remarked that she was not certain, but thought she felt the milk springing in one of her breasts. During the night, twelve hours after, the distention was very decided, and the breast-pump being applied, one ounce or more was drawn and the child applied to the breast. On the day following, the child not nursing sufficiently, the pump had to be twice applied to relieve the painful distention. The application of the current in this case was made daily by the husband, for one week, during which the secretion continued in full quantity. The use of the battery was then abandoned, when, to the disappointment of all, the milk rapidly failed again, and none was secreted. On its re-application "a decided effect was produced, but not so remarkable as at first." On March 6th, he was informed that the battery, not acting well, had been discontinued for over a week, and that the flow of milk had almost ceased.

In this second case, though not so fortunate in its final results as in case first, the influence of the galvanic current in awakening the milk secretion seemed more marked, as repeated opportunities were afforded for observing the effect of both its application and withholding. Unlike the first case, this lady throughout the entire period continued in good health and spirits, and in every respect her general condition was as comfortable and favorable as could be desired—except in the failure of lactation. He advised that a mild daily current be again resumed, with dry-cupping to the cervical and dorsal spine, and nourishing fluid diet, in the hope that the secretion might again possibly be aroused.

Having remarked that it is almost unavoidable, in considering the effect of such an agent as electricity or galvanism on any function, whether that function be sensory, motor, secretory, or trophic, that we have suggested to our minds the nervous influences and instrumentalities that are involved, or supposed to be involved, in the *rationale* of all such procedures. Dr. Campbell goes on to discuss the neuro-dynamic influences affecting the mammary gland and lactation, and then gives his conclusions as follows:

*First.*—That from a consideration of the varying locality of the mammary gland upon the trunk of the several genera of mammalia, the nervous supply being furnished indifferently by any portion of the central spinal system; the object and the efficiency of the secretion being the same in all of them as in man; and especially from the known fact that anomalies in women have transferred the gland to abnormal localities, as the groin, etc., it may be decided that the neuro-dynamic excitation in the mammæ of the human female is of the simplest nature, and no other than that under which the function of the integument, as sensation and secretion, are accomplished.

*Second.*—After the foregoing conclusion, in regard to the simplicity of the neuro-dynamic influences concerned in the function of lactation, and in the light of the experience of the cases herein reported, we may reasonably expect the stimulus of a well-selected and judiciously applied electric or galvanic current to prove, in many cases of arrested and deficient lactation, a hopeful and often an efficient therapeutic measure.

FUNCTIONS OF THE MEMBRANES IN LABOR.—In a paper read before the

Chicago Gynæcological Society, and published in the *Chicago Medical Journal and Examiner* for March, 1885, Dr. Henry T. Byford, advocates a departure from the methods now taught, in the preservation of the membranes from rupture until they dilate, or aid in dilating, the vulva, as they are sometimes observed to do when they are unusually tough and the child is born with a "caul."

According to the present obstetric teaching and practice, as he understands them, the patient in labor is encouraged to go about the room until near the end of the first stage, thus, whether purposely or not, stimulating the uterus to contraction, and adding gravitation to the other forces that bear upon the membranes in the cervix. This practice, with subsequent pulling at the os with the finger, or pressure upon the abdomen whenever the pains lag a little, or both, often has for its effect the discharge of the amniotic fluid, at, or near the end of, the first stage. If, however, pursuing an opposite course, the patient is put to bed upon her side as soon as, or soon after, the os commences to dilate; and if the pains are more severe than can be easily borne (as they are apt to be in highly civilized communities), an opiate, or other anodyne, is given to keep her comfortable, the presenting bag will be relieved of the weight of the abdominal contents, and saved from the more intense and frequent action of expulsive powers that accompanies an erect, or semi-erect, position.

After the os is widely dilated, and the membranes receive but little support from the cervix, they will be less liable to rupture if we put the patient upon her back during uterine action. The head will be better able to form a ball valve, and thus take part of the pressure from the presenting pouch, viz.: as much as is required to overcome the elasticity of the ring of the cervix against which the descending head impinges. Now, after the os is widely dilated, when the resistance to the descent of the head is small, and the consequent strain upon the protruding membranes great, a change occurs which invalidates the reasoning by which some of the German authors would make their rupture, or the bringing of labor to a stand-still inevitable at or near the complete opening up of the uterine neck. The membranes, being loosened from the lower segment of the contracting uterus, are pushed down through the dilated cervix along with the head, instead of being merely stretched; they come in contact with the undilated vagina and are supported by it; and, as the whole parturient canal is converted into one cavity, the head follows the bag of waters down to the vulva, just as it followed it down to the external os, aiding in the dilatation, and sharing the pressure from behind. The second stage of labor becomes a kind of repetition of the first, the dilatation of the vagina and vulva being an analogue of that of the cervix and external os.

The membranes, with such management, are subjected to no more strain during the second stage of labor than they are under the prevalent mode of treatment, during the first stage. In fact the pressure upon the membranes under the ordinary start-on-the-run management, is not usually sufficient to rupture them as early as is commonly supposed. In Dr. Byford's experience they have either ruptured at or near the beginning of labor or else persisted after the os has been dilated. Students are taught to rupture at the end of first stage; and nearly all of the physicians he has consulted usually find it necessary to do the same. Indeed, recent graduates are apt to betray a thrill of pride at the recital of the number of times they have successfully performed this hair-pin obstetric operation.

Having quoted the views of Playfair, Scanzoni, Leishman and Naegle, he gives the following as a fair sample of a large proportion of obstetric cases in his practice since he has adopted this plan:

Mrs. M——, a healthy, robust, Canadian primipara, twenty-five years old, sent for me at 5 A. M. I found her suffering intensely with very frequent and very painful uterine contractions, which had commenced about six hours before. The os uteri was dilated to about the size of a silver twenty-cent piece, and in another hour to, perhaps, the size of a silver quarter of a dollar, and the pains continued as before. I prescribed fifteen minim doses of McMunn's Elixir of Opium, to be repeated every hour until easier, and left her for two hours. I returned to her soon after she had taken the third and last dose, and found her dozing between pains and not complaining at all. I ruptured the membranes after they had protruded through the vulva and delivered her at 10 A. M. No unusual symptoms occurred then or afterwards, except that she (I use her own expression) "had the baby almost without any pain."

When the membranes, he goes on to say, are ruptured at the end of the first stage, there results, after a temporary rest, a rapid and very great change in the character of the labor, but when they are preserved from rupture it is impossible to tell, without the finger in the vagina, when the first stage ends and the second begins. The torment that belongs to the stretching of the cervix subsides, and the labor gradually assumes a straining character, but only at the last moment, after the vulva is dilated to half or two-thirds of the size necessary for the exit of the head, is that severe suffering felt, of which primipara are otherwise wont to complain as soon as the head commences to bulge the perineum, or even after. The vagina is filled with a tumor so smooth and soft that its presence cannot be felt by the patient at any one point, so elastic that a light finger touch indents it, and yet the whole power of almost every uterine muscular fiber bears efficiently upon it. It is strange, he thinks, that obstetric science can teach the deliberate breaking up of this simple process of nature and the substituting of an unnatural and artificial one, by which nearly all of the fibers of the lower half of the uterus operate only to contuse its own structure against the bare parts of the fetus without materially aiding in its descent, while the fibers of the fundus jam the hard, rough, inelastic, and comparatively unyielding head down through the vagina against the perineal centre, bulging and stretching the perineum, according to Lusk, "from four to five inches in its antro-posterior direction," and all of this without any provision for a gradual dilation of the vulva, or of making its axis, before delivery of the head, correspond with the axis of the pelvis.

After speaking of the mechanism of dilatation of the perineum and vulva, by means of the membranes, he gives the following other reasons for keeping the membranes intact: Malposition of the head in the pelvis can more often be determined before rupture, and be corrected with greater facility. The body of the child cannot easily be grasped by irregular or tonic contraction of the uterus, as it occasionally is after rupture, when the parts of the child impinge upon the interior of the uterus—a condition of affairs which, when present in only a slight form, sometimes renders impossible the rotation of the occiput forward without disastrous twisting of the child's neck. The cord is much less liable to prolapse, and, if prolapsed, can be more easily made to slip back into the uterus.

He then concludes as follows: After having ruptured them too soon in a number of instances, I now wait until the head threatens to come through with the membranes intact, and, in order to keep them so until then, I advise my strong patients not to bear down much, or else give a little chloroform with each pain. We can usually, by thus diminishing the pressure, delay rupture long enough for the head to be delivered with or between the succeeding pain or two. The uterus not having been long in direct contact with the fœtus, the least possible injury will occur to each; the vagina will have suffered neither from dragging down nor friction, nor will the hemorrhoidal circulation be long interfered with. But above all, the perineum will have been taken care of, and Goodell's riddle of the sphinx be solved. Whenever the membranes rupture before their office of dilating the vagina or vulva is completed, a strong or covered rubber-bag may be introduced and then inflated with water or air, until it fills the lower unoccupied part of the vagina, so as to be made to dilate the vulva, during pains, somewhat after the manner of the membranes themselves. When a rubber-bag is not at hand, the vulva can be partly dilated by two or three fingers placed in the vagina and pressed backwards gently, but firmly, with each pain, and the capping of the head by a membranous perineum, wherein lies the chief danger to its integrity, be prevented.

FIFTY CASES OF ABDOMINAL SECTION.—In reporting fifty cases of abdominal section in the *New York Medical Journal* of April 4, 1885, Dr. James B. Hunter makes some remarks on laparotomy in general, and adds a few notes on such of the cases as seemed of special interest. His opinion on certain points in laparotomy, he says, is not based on these cases alone, as he has had the opportunity of witnessing about seven hundred operations of the kind, beginning with those of I. Baker Brown, in 1866. In a large number of these cases he has acted as assistant, and has also had the subsequent care of the patients.

*The Incision.*—It is always best, except in cases of large, solid tumors, to begin with a small incision. An incision three inches in length is quite sufficient for diagnostic purposes, and for the removal of many large cystic tumors.

*The Spray and Antiseptics.*—He considers the use of the carbolized spray invaluable in the operating-room. It should be very fine, and allowed to fill the room for at least an hour before the operation, the apparatus being placed high. During the operation it should be directed away from the patient, and on no account be allowed to play directly upon the exposed abdominal viscera. Coarse spray thus directed will rapidly cool the surfaces that should be kept warm, and thus, if not by the poisonous effect of the carbolic acid, add greatly to the danger of shock. The spray is especially valuable when spectators are present, as constituting a sort of veil between them and the patient. The water used for the spray, as well as that used for sponges, instruments, irrigation, etc., in all abdominal operations, should be water that has been boiled, and, if posible, water that has been heated above the boiling point.

He now believes carbolic acid fully as efficient an antiseptic as the bichloride of mercury, while it is free from the dangers and inconveniences attending the use of the latter. The bichloride cannot be used for the instruments, and the use of two solutions is a source of perplexity to assistants and nurses.

*Illumination.*—The small, portable electric light, now to be obtained, will be found of great practical utility in searching for deep-seated bleeding-points during a difficult operation.

*Drainage-tubes.*—There is room for the exercise of much judgment in the use of drainage-tubes. If there is danger of hemorrhage, a small, straight glass tube left in the lower angle of the wound gives a valuable indication of what is going on within. The tube may be examined from time to time with a syringe, or with a little absorbent cotton on a probe. If there is no bleeding the tube may be removed in a few hours, and the wound closed. If there is evidence of oozing, the tube affords a means of removing the blood or serum. A little blood is often disposed of by the peritoneum without difficulty, but sometimes a very small quantity is sufficient to give rise to septicæmia. The danger of leaving a small tube in the wound, provided it is lightly closed and covered with an antiseptic dressing, is very slight. Where there have been extensive adhesions separated, or where any portion of a cyst remains, or where there is a very large pedicle, the use of a drainage-tube is advisable. The best tubes are those made of glass, of small caliber, perfectly straight, and having no openings at the side. In adjusting these tubes in the wound all the sutures that will be necessary for the final closing of the wound should be passed while the patient is under ether, and the ends left long, so that, on the removal of the tube, the wound may be closed without pain or disturbance.

*Closing the abdominal wound.*—Sufficient attention, he thinks, has not been given to the very important matter of securing a firm abdominal wall. Sometimes the edges of the wound are not brought together exactly, and, therefore, fail to unite perfectly. Sometimes an abscess forms in the site of the wound, rendering the subsequent union slight and liable to yield to pressure. For over three years past he has made a practice of closing the peritoneum separately, with a continuous catgut suture, using what is known as the "button-hole" stitch. Before closing the peritoneum, one, two, or three silver-wire sutures, according to the length of the wound, are passed directly through the abdominal wall, including the peritoneum. These sutures are left loose until the others are introduced. The rest of the sutures are of silk, thoroughly carbolized, and are carried through everything but the peritoneum. Where a drainage-tube is used, the peritoneum is closed with catgut up to the tube. Since adopting this method of closing the wound, he has rarely seen abscesses or imperfect union.

*Refrigeration.*—The use of refrigeration, generally by the rubber coil, in incipient peritonitis, is of inestimable value. Where peritonitis is fully developed, it is still efficient. In cases of septicæmia the abstraction of heat does not necessarily benefit the patient. The temperature may be kept down to the normal point in such cases, and yet they may go on to a fatal termination.

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AN ENORMOUS FALSE ANEURISM IN THE LEFT FLANK COMMUNICATING WITH A TRUE ANEURISM OF THE ABDOMINAL AORTA.—In this case, reported by Dr. George B. Shattuck, in the *Boston Medical and Surgical Journal*, April 9, 1885, the diagnosis lay between a vascular semi-fluid or gelatinous growth of a malignant character and an aneurism probably of the so-called false or diffused class. The opinions of those gentlemen who saw the case were pretty evenly divided between the two, and with some varied occasionally at different periods of the case. J. C., a currier, fifty-one years old, entered the Boston City Hospital on February 2d. His general health had been fair, and he had continued work until eight weeks before entrance, when he began to suffer from pain in the left lumbar region, extending down the thigh to the leg and foot. For two or three weeks he had been unable to lie in any position except upon the left side, and there was a commencing bedsore over the left trochanter. Four days before entrance, the dispensary physicians, who had been summoned on account of the pains in the leg, called patient's attention to a large, hard tumor between the ribs and the brim of pelvis, and advised removal to the hospital. The tumor in the left side presented a hard mass, extending from the cartilages of the ribs above to beneath the crest of the ileum below, and from two inches to the left of the umbilicus in front to near the spinous processes of the vertebræ behind. It was immovable, rather tense, smooth on the surface, though not entirely regular in outline, and dull on percussion. A pulsation, which at entrance was but little marked, became in a day or two, with improved nutrition, very noticeable both to the eye and hand, especially at two points: one in front midway between spine of ileum and pubes, and two inches above Poupart's ligament, the other at the back between the crest of ileum and lower border of ribs, four inches outside of the spine. Pulsation at each point being very marked as that of an aneurismal sac with thin walls. There was no thrill or bruit, but a slight murmur over the point referred to at the side. The pulse in the femoral and popliteal arteries was feeble. There were enlarged glands in the left groin above and below Poupart's ligament. There was no apparent ascites, and no abdominal tenderness except over the swelling.

The tumor continued to increase in size and tension, the pulsation becoming more pronounced and more general, until it assumed the appearance of a good-sized watermelon, lying across the left flank, with an ill-defined sulcus at one part and a smooth, though not quite regular, surface; the end under the ribs being discolored and suggesting an impending slough. February 15th Dr. Shattuck inserted a hypodermic syringe and obtained a dark, bloody fluid mingled with pus. March 1st he used the aspirator; the needle being inserted one and one quarter inches, no fluid followed, but when pushed in two and one half inches a dark-colored, quickly coagulating bloody fluid flowed through the tube, the last of which was of a brighter color. Four ounces were withdrawn, which, under the microscope, showed nothing but blood. The needle at no time gave the sense of being in a cavity. The patient died on March 19th, six weeks and a half after admission, from exhaustion, having refused nourishment, and been delirious at times, for several days previously.

Autopsy by Dr. W. W. Gannett, twelve hours after death, March 10, 1885.—(First portion of report omitted.) On opening the peritoneal cavity, the descending colon was found to be situated beneath the transverse colon, and extending diagonally across the abdominal cavity. The left half of the abdominal cavity was occupied by a large fluctuating mass, the upper wall of which was formed by a muscle, the fibres of which were nearly transverse. On incising this muscular wall, a cavity was disclosed with irregular walls, filled in part with fluid blood, in part with laminated coagula, in part with soft, dark-red clots. The posterior wall was formed in part by the inner surface of the ileum, which was exposed in its upper portion and eroded; in part by the tissue lying immediately beneath the origin of the quadratus lumborum muscle. This large cavity communicated below through the femoral canal with a cavity in the upper part of the thigh, the size of the first, having a smooth wall, and coagulated blood for contents. Just below the arch of the diaphragm the aorta was dilated so as to form a sac the size of a closed fist. The *posterior wall* was formed by the bodies of the last dorsal and first lumbar vertebræ, both of which were eroded about half their depth. From the anterior wall were given off the phrenics and the cœliac axis. In the lower portion of the sac, just to the left of the vertebral column, was a *slit-like opening*, with smooth edges, large enough to admit four fingers; it communicated directly with the large sac of blood previously described. The aorta showed throughout, in the intima, numerous opaque, yellow, elevated patches.

*Diagnosis.*—Fatty degenerations of muscular substance of heart. Vesicular emphysema of lungs. Blood pigment in the tubules of the kidneys. Aneurism of the abdominal aorta, rupture behind the peritoneum and transversalis muscles, with the formation of a large false aneurism, occupying the whole lumbar region on the left side, and extending into the groin. Erosion of the vertebræ.

THE PREVENTION OF OPIUM ADDICTION, WITH SPECIAL REFERENCE TO THE VALUE OF GALVANISM FOR RELIEF OF NEURALGIC PAIN.—In a paper published in the *New Orleans Medical and Surgical Journal*, for April, 1885, Dr. J. B. Mattison, of Brooklyn, says that, granting pain to be the great genetic factor, and believing prevention better than cure, one can appreciate the surpassing importance of the therapeutics of pain in relation to the prophylaxis of this growing neurosis. Pain, be the character what it may, if sufficiently persistent, and the giving of opiates too prolonged, will, almost unfailingly, beget this disease. But it is to the strictly neuralgic type, the one so often encountered by every-day medical men, that this assertion pre-eminently applies. The fact cannot be gainsaid, that neuralgia abounds, and that its treatment with opiates—especially morphia hypodermically—has made more opium habitués than can be placed to the credit of any other one cause. While Dr. M. does not think that this lamentable sequel can be entirely prevented, he believes it can be largely lessened, and the special point of his paper is to invite renewed attention to a remedy, the value of which the profession at large has not, he thinks, proper knowledge and appreciation, and which, in his opinion, outranks all others as a substitute for opium in the relief of neuralgic pain. No physician who has not had properly directed experience on this subject, he says, can form any idea of the possibilities for good possessed by a well-equipped galvanic battery.

To the ex-habitué, some substitute for opium is a *sine qua non*, and nothing equals the galvanic current for this purpose. One great advantage it possesses is promptness of effect, often surpassing, in this respect, even hypodermic morphia. The latter is sometimes ineligible, and when it acts kindly as an anodyne, is frequently followed by such nausea, vomiting, headache, or general discomfort as to make the freedom from pain a relief dearly bought. No such charge can be made against the current, for when it fails, as at times it will, disagreeable sequels are not noted, if the battery has been properly equipped and rightly managed. He then goes on to say: We are not aware that ex-opium habitués possess any peculiarity or susceptibility that makes neuralgic pain in them any more amenable to galvanic treatment than when it occurs in those not addicted to this drug. If this be true, it follows that the latter are as eligible subjects for the constant current, with just as rich promise of successful result, as the former.

It is not intended, he says, to laud galvanism as a specific for neuralgia, or as a substitute for well-directed general treatment to improve the impaired nerve statue on which the painful bouts depend. Neither of these roles will it fill, although cases have been recorded where entire and permanent freedom from suffering has followed a single application; but this is not the rule. The great point gained by it is relief from pain without resort to opium—the exceeding importance of which will be all the more appreciated when one considers the oft recurring outbreaks so peculiar to this disorder and the consequent need of repeated narcotic doses to secure the desired result.

Having decided on a trial of galvanism, the strength of current, points of application, and length and frequency of sittings must be duly considered. Regarding all these, careful study should be made of some standard work on the subject; but, in general, it may be said, as to the first, it must be painless—nothing more than moderate tingling, burning, or redness under the negative pole. When used about the head, a current strong enough to cause slight flashings of light, if the eyes are closed when the circuit is broken, will usually relieve the pain. In a battery, newly charged, we have known two cells suffice. Minimum strength is required about the brain; marked flashes, vertigo, or faintness are excess, and must be avoided. Neuralgia of the trunk and extremities requires a stronger current, the extent of which individual peculiarity must determine.

The site of the electrodes varies according to the nature of the case, but, as a rule, the positive pole over the vertebra corresponding with the exit point of the nerve affected and the negative over the painful part will succeed. Some insist on a reverse order—*i. e.*, negative to the spine—but, in general, it is not essential; either will answer, though, as a fact, we have invariably noted, in bilateral cases, earlier subsidence of pain under the negative pole. In the latter, exceptions to this method may be practiced: for instance, in migraine, an electrode on each mastoid, or, in supra-orbitral or temporal, over each eye or temple.

Length of sitting varies. Prolonged *séances* are more allowable to parts other than the head and face. Pelvic neuralgias and sciatica most often require extended sittings. If several painful points, the current can be no longer given by varying the site of application, taking care not to break it, by lifting the electrode, but allowing it to glide from one place to another. Frequency of sitting depends on frequency of attack. Every bout should at once be arrested. The more promptly this is effected the better. It lessens nerve exhaustion and tendency to recur.

Since, then, there is at command a remedy so effective, and, withal, so free from unpleasant result, we urge the profession to avail themselves more largely of this powerful auxiliary in the therapeutics of neuralgic pain, instead of the so common resort to opiates, and especially the facile—yet so often fatal as regards the mental and physical health and happiness of many—hypodermic syringe. It is a trite story, but it is a true one—this using of opium to one's harm. Its importance can not well be over-insisted on, and the right-minded physician must admit and appreciate it, if he would conserve the well-being of many who consign themselves to his care.

* * * * *

Would it not be wiser for every practitioner to equip and acquaint himself with a galvanic battery, and make trial of this, rather than, at once, to opium? Would it not be far more prudent to provide his neuralgic patient—if occasion required—with this, and instruct as to its use, rather than to supply morphia, or an opiate prescription, which, as every one knows, can be so easily refilled, to excess, or, most pernicious of all advice—since it is almost sure to have a ruinous ending—to counsel the purchase and self-using of a hypodermic syringe? Let each one put this query to himself and weigh well the answer.

THE PREVENTION OF EPIDEMICS.—At the last annual meeting of the British Medical Association, Dr. Ezra M. Hunt, M. D., of New Jersey, read a paper (*British Medical Journal*, March 14, 1855), in which he gives a syllabus of the method in which he thinks we should conduct our inquiries, in order to accomplish more in the prevention of epidemics.

The chief contentions of this paper are as follows:

1. In the study of the *contagium vivum*, we are to recognize not only change from culture or attenuation, but, as in plant-life and animal life, to recognize manifold changes which may take place, so discursive as to obscure identity, and so as to make what, in pathology and treatment, may be a new disease, without involving the doctrine of spontaneous generation.

2. We must give significance to the effect of imparting a disease to the system by channels or modes of introduction different from what may be called its normal method of entrance, and allow for modification of effect from this cause, without any real attenuation.

3. We must study closely, not only the general effects of surroundings, but the fertilization or rankness which certain diseases attain from a compost especially adapted to them.

4. We need, with the same precision and in a similar direction, to ascertain what are the conditions of individuals who furnish in themselves extraordinary soil for communicable diseases, or who withstand seizure amid exposure, or have but a mild attack, and to recognize that there are ascertainable reasons for this difference, a definite law of susceptibility.

5. We need to give great prominence to a study of direct prophylactic methods, and such as shall seek, during exposure or the prevalence of an epidemic, to prevent an attack, by imparting to the blood and tissues the presence of such substance as shall prevent those changes which an introduced morbific agent would otherwise set up.

## ORIGINAL ABSTRACTS.

AN INSTANCE OF CURE OF LUPUS ERYTHEMATOSUS.—Mr. Jonathan Hutchinson reports (*British Medical Journal*) a case of complete cure of this affection. The patient first came under observation in March, 1881, when arsenic was prescribed internally, and a weak solution of tar and lead to bathe the patches. The arsenic was used for but a short time, however, and he became worse. Two years later, in 1883, it was insisted that he should again take arsenic in full doses, and it was then continued regularly for fifteen months, and cured the trouble. In February, 1885, the patient presented himself, and Mr. Hutchinson found that white, thin, inconspicuous scars had taken the place of the former patches, and that there was neither thickening nor erythema at their edges. In commenting on the case, he says: I have prescribed arsenic for many other cases of lupus erythematosus, but having never realized any definite result, I have not urged it with much faith. It may easily be the fact that it has seldom been sufficiently pushed. It will be seen that, in this case, we have proof, in the occurrence of arsenical shingles and of red eyes, of the full physiological influence of the drug. I have, in a certain minority of cases, cured, or partially cured, this disease by the use of external applications, but have never thought that internal medication had any definite effect. This case would certainly suggest a more free use of our great remedy. I fear, however, that we shall find that it is by no means generally successful, and hat Mr. B.'s case is, after all, a fortunate exception to rule. I have certainly seen many cases in which other surgeons had, before the patient came to me pushed arsenic very freely, and sometimes, apparently, rather with injury than with benefit. The clinical fact that lupus erythematosus differs from all other forms of lupus in its tendency to develop symmetrically in isolated and independent patches, seems to show an alliance with psoriasis. At any rate, it indicates a constitutional rather than a local origin, and, as such, implies the probable need of internal remedies.

A CASE OF RHINOSCLEROMA.—Dr. Morell Mackenzie adds some notes in the *British Medical Journal*, on a case of rhinoscleroma described by Drs. Payne and Semon at a meeting of the Pathological Society in March: On inspection, the nose was plainly seen to be much thickened, especially about the alæ, and across the bridge. On the upper lip, close to the openings of the nostrils, were two small, slightly raised patches, red in color, smooth, and glossy on the surface, and having the appearance of scars. The nostrils were altered in shape, being almost circular, and quite rigid, owing to thickening and induration of their margins. On looking into the nasal fossæ, the septum was seen to be almost completely destroyed. The two fossæ thus formed, practically, one cavity, the walls of which were irregular and roughened throughout with new growth. The neoplasm was firm and inelastic to the touch, but not absolutely hard. It gave, indeed, a sensation resembling that caused byeglue that is not quite "set;" a comparison, moreover, which was naturally suggested by the somewhat glutinous appearance of the surface. Here and their the nasal walls were excoriated, and in several places shreds of thick mucus and blood-stained crusts were adherent to them. The whole cavity was exquisitely tender, and bled easily when touched. Pressure on the outside of the nose was also very painful, especially at the bridge. The posterior nares were blocked up by masses of growth springing from the septum on each side, and spreading some little way into the nasopharyngeal space along the posterior surface of the velum. On looking into the mouth, the uvula was found to have completely disappeared, and the soft palate was partially destroyed in the middle line, so that it looked somewhat like a pointed arch across the fauces. The whole substance of the velum was thickened and rigid, and its anterior surface had a scarred and shrunken appearance. There was some ulceration along its lower edge, more particularly on the left side, where the margin had a bevelled look, owing to the anterior layer being rather more eroded than the posterior. The ulceration extended on that side to the fauces along the anterior pillar, which was thickened, especially at its junction with the side of the tongue. Owing to this, probably, the mobility of that organ was somewhat impaired, and the patient complained of great pain when it was pulled forwards or pushed down.

*Treatment.*—This had consisted in attempts to destroy the new growth with the galvano-cautery and various caustic agents. Interstitial injections of salicylic acid—said by Ed. Lång (*Wien. Med. Wochenschrift*, No. 24, 1883) to have been successful in his hands—had also been tried. None of the various measures adopted had apparently in any way checked the progress of the disease. My own endeavors were entirely directed to the relief of what the patient stated to be his most troublesome symptom—namely, the stoppage in the nasal passages. With this view, I attempted to force a way into the nasopharynx with the galvano-cautery The patient having been placed under the influence of ether by Mr. Bailey, I succeeded in penetrating the obstructing mass with a large porcelain-knobbed electrode. A pretty free passage for the air was thus established on the left, and also, as I believed at the time, on the right side. After a day or two, however, it was found that, whilst the left side was in a very satisfactory state, the right was still impervious. The patient was, with much difficulty, induced to submit to a second operation, when I renewed my previous attempt, but without succeeding in destroying the obstacle. The patient declared himself so much satisfied with the comparative freedom of nasal respiration which he now enjoyed that he declined to have anything further done; otherwise, I had intended to destroy the tissue with a dentist's drill, as modified for use within the nose by Dr. Goodwillie, of New York (*Medical Record*, New York, November 12, 1881). He was directed, before his departure from England, to provide himself with a set of my nasal bougies, with which he was instructed to keep the passage as thoroughly dilated as possible.

DEATH BY ELECTRICITY.—In commenting on the post-mortem appearances in a case of death from the action of electricity, just published by Drs. Sheild and Delépine, the *British Medical Journal* says: The Health Exhibition case, as it may be conveniently termed, resembled some recorded cases of death from lightning in the most distinct of the external evidences of injury; for on the outer aspect of the left index-finger was a small elongated blister, about half an inch in length, which had the appearance of a burn; but there was no congestion of the skin around it, nor any smell of charred epidermis. Drs. Sheild and Delépine describe, with great care and minuteness, the appearance of the structures around and included in this blister. It must ever be borne in mind that, whilst almost every student has examined sections of sarcomata and carcinomata, the pathology and histology of blisters, burns, and scalds have been neglected by many leading pathologists. Hence, what is common to all blisters might, in such a case, be taken as pathognomonic of electric vesication. In this instance, however, the authors of the paper imply that they found distinctions, which want of space prevented them from describing; and they promise further an elaborate discussion of the subject. There is no doubt that Drs. Sheild and Delépine have succeeded in discovering very definite changes in the skin involved in the blister. The cells and their nuclei in all the layers of the epidermis were found to have undergone great modifications from their normal type. Even the tough stratum corneum, the most superficial part of the cuticle, exhibited signs of change. Its dry, horny cells were seen, in the middle of the blister, to be condensed and fused together, forming a homogeneous, waxy mass. The next layer, or stratum lucidum, was conspicuous at the margin of the blister, and still more distinct within the limits of the blister, excepting in the actually central portion, where it could not be distinctly recognized from the stratum corneum. The next layer of the epidermis, which consists of flattened scales with granules, of a nature intermediate between protoplasm and keratin, around their nuclei, and is termed the stratum granulosum, was found to be much altered, and fused with the rete Malpighii, or stratum mucosum, towards the center of the blister. In the rete itself, the changes were marked, and are described with minuteness. There were distinct morbid appearances in and around the nuclei, and a remarkable fibrillation of protoplasm. In the cutis vera, or corium, the papillæ were abnormally flattened, and a complete fusion of the delicate fibres, abundant in the true skin, had taken place in the middle of the blister, producing a homogeneous appearance. The epithelioid cells of the capillaries had contracted, so that there were a number of openings or fissures between the individual cells, which, it must be remembered, form the only true wall of these minute vessels. Some of the cells in the coiled part of the sweat-glands exhibited considerable deviation from their natural appearance. The changes in the nerves were not considered, according to Drs. Sheild and Delépine, to be either very distinct or highly characteristic. They dwell, on the other hand, upon the abnormal clearness and distinctness of the tactile (or Meissner's) corpuscles. These bodies are, we believe, tolerably familiar to all who have studied physiological manuals; they are found in the papillæ of the corium covering the palmar aspect of the fingers and the plantar aspect of the toes, each being always connected with at least one nerve-fibre, which winds round and ultimately fuses with it. The morbid distinctness of the corpuscles may be due to some severe but unknown injury to their substance, produced by the electric current, an injury which, at the very moment of its infliction, may transmit a profound or even deadly impression to the great centers along the nerves in connection with the corpuscles.

CATALEPSY IN A CHILD THREE YEARS OLD.—Dr. A. Jacobi reports this case in the *American Journal of the Medical Sciences* for April, 1885. The patient, who was a girl, was admitted to Mount Sinai Hospital, New York, September 4, 1879, suffering from typhoid fever, and on September 10, it was found that she had whooping cough also. On September 25 and 27, the notes taken of the case were as follows: At 10 A. M. there was a good deal of twitching of the lids, and also the eyeballs turned upward, tonically; occasionally there was divergent strabismus; but in the night she slept with her eyes closed. When the arms were lifted up they would remain in any position in which they were placed. When she was directed, in a loud voice, to drop the arms, she would slowly do so. Her legs were in a similar condition, and would remain in the position in which they were placed. The fourth finger, taken separately, remained extended or flexed when placed in either position. The arm could be partly extended, partly flexed with some force, and remained in that position. Still there was some voluntary action left; for, when her arms and hands were in a natural position, she would attempt to take a penny from the bedclothes. Her muscular action in general was very deficient. When she was set up in bed, her head fell forward, and then, again, when the arm was lifted vertically, it would remain in that position for minutes, and then slowly come down. During the last three days she passed a large quantity of urine, with a specific gravity of 1020. Her extremities were very cold, and she was indifferent to everything about her; but when she was aroused by strong impressions, even the twitchings of the eyelids would, for a moment, cease. September 27. The patient was a little stronger, and sat up in bed. The twichings of her muscles persisted. When the extremities were placed forcibly in the cataleptic position, reduction was attended with little pain. The lower extremities were less abnormal than the upper ones. She could stand, and walk two or three steps. Sensibility to contact, pain, and temperatures entirely lost. Tickling of the soles of the feet yielded only slight, reflex movements, and the patilla tenden inflex was greatly diminished; her eyes were staring, and her appetite was ravenous. The cataleptic condition afterwards became more marked, a great deal of strength being required to extend the arm when flexed; and it was not until the 20th of October that the cataleptic symptoms had entirely disappeared. She was still in bed November 5, but sat up occasionally: her appetite was no longer ravenous; urine less copious. The child recovered, but remained anæmic and weak longer than patients recovering from typhoid fever are liable to do. Dr. Jacobi makes the following comments on the case: The only case of catalepsy in a child which has come to my notice besides the one reported by me occurred in a boy of thirteen, who suffered from chorea magna during the space of two years before he died in an insane asylum. His attacks of chorea were very violent indeed, interrupted by intervals of several weeks, in which both his convulsive efforts and his psychopathic condition would improve, and would alternate sometimes with brief attacks of catalepsy, with but partial consciousness, diminished or destroyed will power, and the waxy flexility, all of which symptoms were present in my other case, and are claimed to be those of the morbid condition under consideration The literature of the subject in general is by no means inconsiderable, but. the cases observed during childhood are but few in number. In his paper, published in Gerhart's *Handb. d. Kinderk.*, vol. v. I. p. 186 *et seq.*, Monti quotes but eleven cases met with in children, male and female in about equal numbers, of from five to fifteen years, the average age being nine years. I know of no case previously reported of a child of three years; in it all the symptoms, psychic indolence, normal or abnormal temperature, cold surface, anæsthesia, analgesia, *flexibilitas cerea*, and diminished patellar reflex (the latter is frequently intact) were found combined. The increase of urine during a good part of the catalepsy was a remarkable feature, such as is seen in hysteria of both adults and children. But while it contained no sugar, and nothing abnormal, except large quantities of phosphates, it had the, in children, unusual spec. grav. of 1015-1020.

FORCEPS IN BREECH PRESENTATION.—Dr. T. M. Rochester, of Brooklyn (*American Journal of Obstetrics*, April, 1885), says that the paper of Prof. Wm. T. Lusk, read before the New York Medical Association, and several short notices recently seen in the different medical journals, have induced him to report the following case: Case.—On January 1, 1881, at about 1 A. M., I was called to see B. H., aged 21, primipara, unmarried. I found her in labor and very much exhausted, and learned that she had been having pains for about twenty-four hours, which had been severe for about two hours previously, when, probably owing to the condition of the patient, they had commenced to die away. On examination, I found the breech presenting in the second pelvic position, right sacro-anterior. At this time the child had descended about midway between the superior and inferior straits. The uterine contractions were irregular and feeble, and the woman decidedly worn out. I gave a stimulant, encouraged her all I could, endeavored to excite "pains" by kneading and friction over the abdomen, and attempted to assist the progress of the child by making traction with my finger hooked into its groin. These means not succeeding, after about an hour and a half I gave the woman half a drachm of fluid extract of ergot, administered chloroform and applied forceps to the breech, when the body was speedily and safely delivered. The head was quickly extracted by making pressure above the pubis with the left hand, while the right fore-finger was hooked into the child's mouth. By this manœuvre, in the present case less time was consumed in the delivery of the head than would have been by the reapplication of the forceps. The placenta was extruded by expression, and firm contraction of the uterus was obtained. The child, which was a large one—estimated at ten pounds—was born alive, and uninjured by the forceps. In considering this case, both at the time and since, it seemed to Dr. Rochester that the application of the forceps to the breech was the proper thing to do. The fact that descent was partially accomplished, and that both lower extremities were bent up parallel to the anterior surface of the child, made the possibility of pulling down a foot exceedingly dubious, while the condition of the mother demanded that expedition should be used. If the forceps are *properly* used—with the *head* as well as the hands—and traction is made gently and *only* synchronous with a pain, no injury, he thinks, can result. Great care should be taken to see that they are properly fitted to the breech, so as to avoid injury to the child's pelvic bones. A slight degree of compression is all that is required or safe—just enough to prevent slipping; and the traction should be made directly in the axis, without any, or very little, of the " to and fro " motion which is so serviceable in the instrumental delivery of the head. Under similar circumstances, in view of his experience in the above case, he would unhesitatingly apply forceps to the breech in preference to using either the fillet or blunt hook.

TWO CASES OF LIGATION OF THE COMMON ARTERY FOR TRIGEMINAL NEURALGIA.—These cases are reported in detail in the *Medical News and N. Y. Med. Journal of April* 11, 1885, by Dr. Joseph C. Hutchinson, who also gives the following recapitulation of them. *First case*: 1. removal of the right upper molar tooth was followed by relief from pain for three weeks, although there had been no pain in the course of the superior maxillary nerve at any time.

2. Removal of the alveolar process of the lower jaw gave complete relief for more than five months, but how much longer I cannot state.

3. Excision of inferior maxillary nerve relieved the pain for three years.

4. Ligature of the left common carotid resulted in relief from the neuralgia for three years and eight months. No cerebral symptoms followed the operation, and none has appeared after a lapse of nearly four years.

*Case second*: 1. Incision of the scalp with no benefit.

2. Excision of the branches of the supraorbital nerve near the supraorbital notch, and at the same time incision of the infraorbital filaments of the superior maxillary nerve near the infraorbital foramen, relieved the neuralgia for six months.

3. Removal of half an inch of the superior maxillary nerve from the infraorbital canal was followed by freedom from pain for an unknown period of time.

4. Excision of the superior maxillary nerve in the infraorbital canal was repeated ten years after the last operation, but the neuralgia returned as soon as the incisions had healed.

5. Ligature of the right common carotid, twelve years after the last operation. There was no relief from pain, and no cerebral symptom followed the operation.

6. Removal of the superior maxillary nerve from the infraorbital canal a third time, a little more than ten years since it was last removed. During the two and a half months after the operation that he was under observation he was free from pain, but then began to complain of neuralgia in the inferior maxillary nerve. I now lost sight of him.

A PECULIAR SYMPTOM IN TRICHINOSIS.—Dr. E. S. Richardson, of Reed City, Mich. (*Journal of the American Medical Association*), calls attention to a symptom or condition which he has noticed very prominently in two cases of trichinosis, and which was present in two other cases, though not so prominent as in the first two, or so evident that he would have observed it had he not looked for it. This condition was a yellowish color in one case, and a brownish yellow color in the other three, extending over the hands and wrists and up the forearms over both flexor and extensor surfaces. The skin elsewhere was clear, and the conjunctiva showed no signs of jaundice. It occurred, as near as could be ascertained, about the seventh day of the disease. So far as he is aware, this discoloration of the skin has not been mentioned in the clinical history of any disease; and if, upon further inquiry, it should be found present in a large percentage of cases of trichinosis, it seems to him that it should be looked upon as a diagnostic symptom. Of the above cases two died, and pieces of muscle from each showed the trichina spiralis in large numbers. This peculiar color was much more marked in the two fatal cases than in the other two.

FOLLICULAR CHANCRE OF THE PENIS.—A case of this was narrated at a meeting of the New York Dermatological Society, held February 24, 1885, by Dr. R. W. Taylor (*Journal of Cut. & Ven. Diseases*). On January 5, 1885, a young man, twenty-six years of age, came to him, who presented behind the sulcus on the dorsum of the penis a little red swelling about the size of a milium, in the center of which was a depression like the orifice of a sebaceous follicle. There was no lesion of continuity present. At that time the swelling did not appear to amount to much. This small spot increased until the lump was the size of half a pea, and at the same time the inguinal glands enlarged, as did the dorsal and lateral lymphatics. The depression in the center of the spot also increased in size, and ulcerated. About February 5, the morbid mass, together with the lymphatics, greatly resembled a miniature flute, with the flaring end at the surface. The chancre was then about the size of the end of the little finger, and the lymphatics as large as a goose quill. There was so much œdema present that he gave the patient the protoiodide of mercury internally, and externally mercurial inunctions, with the effect of causing the mass to melt away. About the same time Dr. Taylor saw an exactly similar case, and he said he believed both to be cases of follicular initial lesion, analogous to the follicular chancroid.

THE PATHOLOGY OF DIABETES MELLITUS.—In an elaborate article on the pathology of diabetes, founded on the results of a recent autopsy, published in the *New York Medical Journal* of April 11, 1885, Dr. Wm. H. Porter states that among the other lesions found was primary dilatation of the arterial vessels of the kidney. The intimate connection between the liver and kidney by the sympathetic system he offers as a solution of the dilatation of these vessels, which finally become thickened and wholly unable to contract, and consequently remain open after death. It was also found that the lumen was of more than twice the normal size, and that this condition extended up to and even through the capsule of Bowman, until the coil of vessels was reached. This lesion was not so advanced in every vessel, but all of them were more or less involved. This enormous thickening and loss of contractility easily explains, to his mind, the abundant flow of urine. The pressure exerted upon the tuft of vessels within the Malpighian capsule, or dilated or expanded extremity of the uriniferous tubule, is governed by the contractility of the arteriole just anterior to it. If for any reason this is constantly dilated, and its walls are thickened, it loses the normal contractility, and a greater volume of blood is constantly poured into the tuft of vessels. This, with the unequal strain upon the vessels of the tuft from the constantly varying blood-pressure, weakens their walls and permits of a more abundant escape of water from the blood, and, consequently, a more copious volume of urine. This view, he says, is substantiated by pathological and clinical data, for there are three other lesions of the kidney in which this or a similar transformation of the vessels is met with, and in every instance the lumen of the vessel is increased and its walls are thickened, and a copious discharge of urine is the invariable rule. These are the well-known cirrhotic or red atrophy of the kidney, the waxy kidney, and one form of chronic diffuse nephritis.

## PROCEEDINGS OF SOCIETIES.

[NOTE.—The weekly medical journals very properly publish the proceedings of societies as soon as the societies adjourn. This journal being a monthly cannot, of course, do this; it will publish, therefore, only such carefully obtained proceedings of American and European societies as are most interesting and instructive.—ED.]

### ADDRESS DELIVERED AT THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION IN NEW ORLEANS, APRIL, 1885, BY HENRY D. DIDAMA, M. D., OF SYRACUSE, N. Y., CHAIRMAN OF THE MEDICAL SECTION.

The prescribed duty of the Chairman of the Medical Section is to acquaint you with the progress made during the past year in Materia Medica and the Practice of Medicine.

A literal compliance with the mandate would subject you to a wearisome recital of facts and fancies, which have been gathered already by enterprising medical journals, and scattered broadcast throughout the world.

The spirit of the injunction may be honored by the omission of minor, and as yet unestablished, additions to our armamentarium; while a few comments are made on the two recent discoveries which have not entirely escaped popular and professional attention: Comma Bacillus and Hydrochlorate of Cocaine.

The prompt and unprejudiced experiments made with the new local anæsthetic; the cordial, enthusiastic, and universal acknowledgment of its merits, are a sufficient refutation of the charge that the medical profession is hampered by a blind and dogged conservatism.

The drug is still in its infancy. Its anæsthetic properties are so remarkable that its use has been limited mainly to surgery, and especially to operations on the eye.

But that it has a valuable future in medicine also there can be no doubt. Its ability to produce contraction of congested blood vessels and pallor of the mucosa early suggested its probable utility in various pathological conditions.

Used as a collyrium in conjunctivitis, and in the form of spray in acute and chronic nasal and laryngeal catarrh, it has been of greatest service not only as an adjuvant, but as the principal remedy. Speakers and singers afflicted with sudden and even persistent hoarseness and aphonia, have found speedy relief and a restoration of vocal functions. It is not improbable that, used with the atomizer, it may mitigate the severity of the paroxysms of pertussis and alleviate the dreadful distress of tubercular laryngitis.

Internally—if its price shall not continue to forbid its general employment—it may be found serviceable in gastric irritation and catarrh; and, like the leaves from which it is extracted, it may prove to be a quick and powerful muscular invigorator.

The brilliancy of the discovery of the Comma Bacillus by the already immortallized Koch is universally admitted; but the claim that this microbe is the pathogenetic factor in cholera is stoutly denied by some eminent observers. This denial is echoed by many worthy people who are constitutional doubters, and who habitually substitute prejudice for patient investigation.

It is asserted on the one hand that the comma is not pathognomonic of Asiatic cholera, being found in the dejections of cholera morbus and even in healthy oral secretions; and on the other hand that in many cases of Asiatic cholera it is entirely absent, and that if it happens to be found its presence is a harmless coincidence. So confident has been this skepticism that its devotees have actually indulged in cholera dejections, swarming with bacilli, as a beverage. Surviving the somewhat repulsive experiment, the inference has been drawn that these microbes have no infectious properties.

Klein and others have demonstrated that the tank water in various parts of India is fairly alive with these punctuating bacilli, and that the natives drink it, and thrive, with avidity and impunity. The poor, maligned comma microbe seems now in a fair way to have a reputation for innocence fully established.

His brother, the bacillus of tubercle, had a similar checkered experience.

Miliary tubercle, it was asserted, identical with that caused by the bacillus, could be produced by inhalations of glass-dust or by inoculations with any inert substances.

One zealous doubter hastened to proclaim that the microbe was a base impostor, that what seemed to be a living organism was simply a masquerading fat crystal.

But more extended observations and experiments, which excluded former sources of errors, have so established the morbific character of this microbe that the affirmation may be made with some assurance: *every tubercle comes from a bacillus.*

In regard to the comma, Klein, in a recent discussion, admits that while this bacillus in and of itself is harmless, it yet does excrete or produce a virus or poison which causes cholera; so that after all the comma is actually essential to the existence of cholera; and the formula is justified: *no comma bacillus, no cholera.*

Let it be admitted that the harm is done not by the living microbe, but by some dead excretion. Still, as there can be no excretion without an excretor, the comma cannot be allowed thus to shirk responsibility. The common law maxim: *qui facit per alium facit per se,* will hold the principal liable for all the legitimate actions of its representatives.

It is admitted by Klein and his supporters that the poison produced by the bacilli is self-multiplying. Then it must be alive; for the dead excretion has no power of propagation. And if it be alive it must itself be a microbe, the vicious offspring of the amiable comma. So that at last the contending parties occupy the same platform, one party laying the blame upon the mother microbe, the other party insisting that guilt rests on the wicked daughter.

Too much admiration cannot be felt for the army of patient and zealous investigators who brave danger, who sacrifice ease, who spurn lucrative pursuits, in their devoted hunt among uncanny objects for some new minute enemy of the human race. They deserve all the plaudits which they receive.

But does not truth compel the sad confession that Bacteriology, with all its brilliant discoveries, has furnished little help to what is of the greatest practical importance to physicians and patients: the Art of Healing?

The fatal march of consumption has not been arrested, and its treatment has not been even modified by the discovery of the bacillus. The dreadful disease still continues to kill one-sixth of the human race; and its ravages will not cease even if the bacillus could be exterminated. For consumption exists and runs its deadly course where no tubercles are present.

No new remedy has been suggested by the discovery of the cholera microbe. It is known that this bacillus thrives in alkaline soils, and has its growth and propagation hindered or arrested by acid conditions. But the acid treatment of cholera was employed with some success more than a decade of years before it was known whether the cause of the disease was shaped like a comma or an interrogation point.

Ague yielded to Jesuits' bark ages before the bacillus malariæ was dreamed of; and the knowledge that vegetable germs are the fountain and origin of the complaint has not added one jot to our ability to manage it.

These facts are admitted, but they do not detract from the merit of the germ seekers.

No practical—certainly no commensurate—good has come from Arctic explorations. But Franklin and Kane and Greeley, and all their noble associates deserve honor and reward, not for what they achieved, but for what they attempted.

Let the spirit of inquiry suffer no discouragement.

The ugly duckling becomes at length the beautiful and graceful swan. The helpless and useless babe grows into vigorous manhood in time. Through untold ages the sun has been sending to us line upon line ardently acknowledging our good mother-earth as his beloved daughter. The messages were unseen by dull mortal eyes till the Bavarian optician, Fraunhofer, came. He discovered the affectionate hieroglyphics in the solar spectrum, but he could not decipher them. He did what he could. He patiently observed and measured and honestly recorded five hundred and seventy-six apparently meaningless lines. And then he waited for the advent of some Champollion capable of furnishing an interpretation. For forty-five years the epistle remained untranslated. Then Kirchhoff, another German, after much patient search, revealed to us the kinship of things terrestrial and celestial.

Some good, let us hope, will yet come from the cruel and murderous Arctic explorations.

In some way Mycology may aid in preventing and curing disease. Let us labor and wait. But may we not, with all due humility and deference, suggest to our friends whose eyes are worn out looking through their fiftieth-inch objectives that the shape of the microbes, or even their behavior in cultivation fluids, is no longer of supreme importance. Is it not time that a little more attention be directed towards discoveries in prophylaxis and therapeutics?

Already the antiseptic precautions introduced by Lister have been of incalculable benefit to surgery. Those who decry Listerism, and claim that cleanliness is sufficient, actually pay tribute to the genius of the great antiseptic apostle. Dirt is harmful only because it contains noxious germs; cleanliness, to the extent that it excludes these germs, is asepticism; and asepticism is Listerism.

We await the advent of some medical Joseph, who shall discover a germicide which is not a homicide at the same time.

These remarks are introductory to my brief and fragmentary address.

The Mycologist is inclined to claim that a legion of diseases arise from micro-organisms. Included among them are the exanthems, typhus, typhoid, and yellow fevers, diphtheria, and mumps, tuberculosis, venereal indiscretions, and cholera asphyxia. Included also are complaints like pneumonia, whose contagiousness is not generally admitted, and rheumatic and malarial fevers, which are non-contagious. It is not pretended that the specific *contagium vivum* of every one of these complaints has been demonstrated by propagation experiments. But as the spirillum of anthrax, the micrococcus of diphtheria, the bacillus of phthisis and cholera, have been captured and exhibited and caused to multiply, the inference—conjecture, if you choose—does not seem forced that all diseases which resemble these specified in having contagious properties, or a period of incubation, or a definite cycle, or capabilities of preventing subsequent attacks, have as their causes certain minute, even if undiscovered, organisms.

Further observations will be made. Alleged discoveries will be subjected to rigorous investigation. The false will be brushed away. The truth will be established. Carping criticism will yield to peaceful acquiescence.

The Neurologist is confident that a multitude of complaints have their origin in the nervous system. And he has good grounds for his opinion. Fever as a neurosis is the subject of an able paper by an eminent writer at this very session of our Association. That a high temperature—the highest recorded—has resulted from injuries of the spinal cord—and where the influence of microzymes is excluded—is not a matter of question. In one instance the temperature reached 122° F. and remained for seven weeks between 108° and 118°. The patient was a lady; the result was recovery.

An incidental inference, which I will not press, is that, if recovery can take place after a continuous average temperature of 115° for nearly two months, it is not the fever which kills or produces rapid softening of the heart and other organs in fatal cases of typhoid. Whether there be special calorific nerves which may be stimulated in moderately severe spinal injuries to increased production of heat; or whether, from continuous compression of the nerves, heat is produced by increased resistance—as in the galvano-cautery—are questions which may merit investigation. Fever, so far as it consists in elevation of temperature, can be a simple neurosis.

That rheumatism involves the nervous system, even if it does not originate in it, may be inferred from the erratic behaviour of the joint affections in rheumatic fever, and from the causes of arthritis deformans, which are often grief, care, prolonged anxiety, and injury or disease of nervous centers, as shown by Charcot and ably presented by Ord at the last meeting of the British Medical Association. Many cutaneous affections, notably zoster, urticaria, eczema, are of nervous origin. Pneumonia sometimes arises from injury of the brain. Diabetes, both the glucose and the insipid varieties, can be produced, as is well known, by irritating certain nerve centers.

Some kidney diseases and liver complaints are the results of persistent nervous disturbance.

The humoral patholgists still adhere to the belief that our physical ailments arise from disorders of the blood. Plethora has its numerous attendant evils, congestions, hemorrhages, cardiac disturbances. Anæmia is the prolific parent of a thousand aches and pains; of indigestions, palpitations, mental and physical debility. Blood containing an excess of a certain element causes diabetes. Contaminated with another, it occasions Bright's kidney and diseases of the urinary tract. Rheumatic fever, with endo- and peri-carditis and permanent valvular disease, is produced by the ingestion or injection of a certain acid, and its absorption into the blood, as shown by the experiments of Richardson and Foster. This acid is produced normally from certain elements of the food. It is transformed before reaching the systemic circulation. Produced in excessive quantity, or failing to be transformed, it poisons the blood—as it does when introduced experimentally—and causes rheumatic joint affections and cardiac lesions. As is well known, these endo-cardial disturbances and valvular injuries are limited almost exclusively to the left heart. The right heart escapes because the acid is normally present there, and so an accustomed stimulant. The transformation is effected in the lungs. In failure of this transformation, the acid passes into the general circulation, and being an unaccustomed stimulant poisons the left heart and works its well-known mischief.

Many dermatologists believe that certain cutaneous affections are caused by impure blood. Eczema is one.

The solidists pin their faith to cellular pathology.

We need not be confused by this conflict of opinions. Neither of the views is exclusively true ; neither is wholly false.

Living foreign organisms; the nervous system; effete impurities of the blood; disorder of the minute cells of which every part of the human frame is constructed; each of these may be a factor in the origination of disease, each may be first or midway or last in the vicious circle of causes—the Etiological Round Robin.

Germs may develop a countless brood and contaminate the blood, either by their own abnormal presence or by a poison which they exude. This poisoned blood stimulates or obstructs the nervous system, and the heat of fever is developed by the correlation of forces.

The presence of certain microbes is made known to the nervous centers. A mandate is sent to the vaso dilators of the lung; congestion and pneumonitis result.

Some irritation at the origin of the vagus produces hyperemia of the liver, over-production of sugar, impairment of the transforming power, disturbance of the kidney, and diabetes.

From disordered digestion an abnormal condition of the blood may result; the nervous system may become involved. Gout may be a product, sometimes appearing in its true character as a torturing joint affliction, and sometimes masquerading as eczema or asthma.

The blood, the nerves, the cells, the microbes are thus seen to have a pathogenic partnership harmony, and to be interdependent.

Without the aid of the nervous system there could be no fever. But the nervous system alone can never originate any specific fever, typhoid or rheumatic or pneumonic. Rheumatism is intimately associated with a poison in the blood, but the excessive production of the poison and its circulation in unwonted vessels are the result of abnormal nervous influence.

From the ovum to the cadaver man is constantly exposed to this conspiracy of morbific influences and agents to destroy him. There are foes without and foes within; foes which march up in front and boldly smite him in the face; foes which approach insidiously and undermine him; foes which are so attractive that he counts them as friends, till he finds himself dangerously smitten under the fifth rib. The destructive influences and agents are in the air he breathes, the food he eats, the water he drinks, and a hundredfold more in the substitutes for water which he imbibes. These foes are the accidents and sudden dangers which he encounters; the misplaced switch of the railroad; the lurking miasm, the infected air, the defective drainage, the insufficient light which sap the foundations of life. They are the seductive habits and vices which sparkle and smile, and then bite like the serpent and sting like the adder. These morbific foes find access to the citadel of life through sometimes one avenue and sometimes another. This one comes in through the blood which it poisons, that one along the path of the nerves which it throws into abnormal vibrations, and the other creeps from cell to cell corrupting and enfeebling every fibre and tissue. Whatever the manner of entrance the result is the same; nerves and blood and cells all become at length involved in the mischief.

To counteract these ruinous influences and agents—to fight with greater or less success against the open and concealed enemies—many means of defense and attack are provided.

There is wisdom gained by observation and experience. There is the obtainable skill of the sanitarian and physician. There are certain inherent powers of resistance and recovery which, ever on the alert, are more potent protectors than that human wisdom which often sleeps, than that human skill which sometimes gropes and sometimes blunders.

We are familiar with what is called the *vis medicatrix naturæ.*

It is a power which is sufficient in many—perhaps most—cases of disease to effect a cure.

Sometimes it brings relief while the physician simply watches or gives inert drugs—and claims all the credit. Sometimes it corrects disorders with the well-timed aid of the doctor. Sometimes it triumphs over the combined attack of the disease and the blundering medicine-man.

This reparative power is the best friend and ally of the wise physician. It may be too weak to accomplish its purpose, and so may need timely and sufficient aid. It may overdo the matter, and so need wholesome restraint. It may be irregular in its action, and so need careful guidance.

Now while we are familiar with this reparative power, we may not be so attentive to another conservative force which is especially important: The Resisting Power. From the *vis medicatrix* this power differs essentially. One is a restorative force—a tendency to come back to the normal condition after departure from it. The other is the conservative force, which *prevents* departure.

A steel spring yields readily to external force, but its elasticity—after the disturbing cause is removed—enables it to resume its original condition. This is the *vis medicatrix.*

Granite rock is not easily affected by external violence. Its power of resistance is great. When the force brought to bear upon it is strong enough to cause it to yield, it goes to pieces, having no recuperative power.

There may be great toughness combined with great resisting power. The iron-clad vessel, when struck by ponderous ball or steel bolt, may be perforated, but it is not hopelessly shattered.

This resisting power is akin to what is called inertia in physics—the tendency of a body in motion to keep going, of a body at rest to remain quiet forever. Light bodies with little substance are easily set in motion, and easily deflected from their course, or arrested in it. A feather can be wafted or stopped by the lightest breath. A cannon ball, an avalanche, are turned aside by no obstacle; they move onward to their destination.

Every human being has more or less of this resisting power. It may be feeble, and yet so united to a recuperative force, that the individual possessor manages to get along fairly well.

Any trifling mishap or exposure may prostrate him, as a reed may be shaken in a moderate wind ; but his elasticity, like that of the reed, brings him up promptly when the storm ceases. He has his frequent ups and downs—we all know how many such cases—he is delicate of constitution ; he may be like an estimable old lady of my acquaintance, at the point of death at odd spells for thirty years ; and yet he lives on by virtue of the *vis medicatrix*, of which he seem to be composed, till all his acquaintances have passed off the stage of action.

On the other hand, this resisting power may be like that of the granite. Its owner may violate all sanitary laws, may laugh to scorn all counsel about what he should eat or drink, or wherewithal he should be clothed. He may expose himself unprotected to cold and wet. He may go without sleep and food. He may tax stomach and brain and muscle to the utmost. And yet he may remain undisturbed. We know such men—men who guzzle poor whiskey every day, and live to be a hundred years old. We know men of granite constitutions, who prowl around late at night, when they should be snugly in bed ; who gormandize, who exercise vigorously all the vices, and yet who remain a standing refutation—as superficial observers think—of all rules for preserving good health. But when some overwhelming calamity comes they are stricken down forever ; their first illness is their final one ; they crumble to atoms.

In every community are those whose resisting power is so feeble from inheritance, or so thoroughly impaired by excesses, that they are but walking dead men—Apples of Sodom, perhaps—fair to look upon, but ashes or petrefactions at the core. They yield to influences which are trivial in their nature, and go into the hands of the undertaker before their neighbors had even heard of their illness.

There are children of old or debauched or scrofulous parents, whose resisting power is so nearly *nil* that their aspirations to stand with the angels receive early gratification, in spite of all that love and skill can do to keep them away from their heavenly home. We name the messenger who summons them cholera infantum or tuberculous brain disease or white swelling ; and, as parents, while we wonder at the mystery, we bow submissively to Him who gives and then takes again so soon. But, as physicians, we are not surprised that diseased and mushroom cells should hasten to early destruction.

No man liveth for himself alone. The good constitution, the strong resisting power of the temperate and upright man, is not only a sure personal defence against disease and a guaranty of longevity ; it is transmitted to his offspring down to many generations. The dissolute man, broken down with disease acquired while sowing his wild oats, suffers not alone. If he did, we might view the transaction with mitigated sorrow. He had his coarse enjoyment, and he can afford to reap corruption. But the evil that he does lives after him in the blighted and wretched lives of his innocent children and his children's children.

A priceless inheritance is a strong resisting, combined with a vigorous recuperative, power. He who has it and preserves it and fortifies it, living a clean and active life, eschewing bodily and mental excesses, and clings to the Divine promises, may bid defiance to disease in its multifarious forms. He need not be afraid for the pestilence that walketh in darkness, nor for the destruction that wasteth at noon-day. Free from fear—the greatest depressant—he shall walk unscathed through all perils. A thousand may fall at his side and ten thousand at his right hand, but disaster shall not come nigh him. And even when the onslaught of disease cannot be wholly warded off, the wounds inflicted shall have speedy healing.

## TEXAS STATE MEDICAL ASSOCIATION.—SEVENTEENTH ANNUAL MEETING, HELD AT HOUSTON, TEXAS, APRIL 21, 22, AND 23, 1885.

(Special Report prepared for GAILLARD'S MEDICAL JOURNAL.)

The Association was called to order at 12 o'clock, noon, Tuesday, April 21, by the President, Dr. H. C. Ghent, of Belton, and, after prayer, the address of welcome was delivered by the Hon. Charles Stewart. In concluding it, he referred to *a Medical Department for the State University*, as follows:

If Texas makes the same progress in the next twenty years that she has made in the last twenty—and surely her growth will be much greater—she will be not only an empire in territory, but also an empire in population, wealth, and all other elements of prosperity. This thought should induce us to build well for the future, and if we of to-day will but emulate the example of those who laid the foundations of our State, and shall carry out their designs, it will soon be unnecessary for our youth to seek educational institutions elsewhere. The literary and law departments of our State University have been commenced, under difficulties, it is true, but perhaps under no greater than have attended institutions of like character in other countries, and perhaps in other States of our Union. I am glad that a commencement has been made, and I trust that it will be sustained by the State until it becomes self-sustaining. But I have said the act creating the University provided a medical department. I know that an election was held for the location of the medical departments, but if anything further has been done I am not aware of it, nor am I advised whether this Association has taken any action in regard thereto. It is not for me, on this occasion, to dwell on the subject of a university for the training and education of those who may desire to enter your profession. I can only mention it, with the hope that it may be agitated until it assumes shape and becomes a purpose in our State politics. The fear of demagogues should no longer defer it. The people are always willing to bear any reasonable burthen that may be necessary to promote the growth and glory of their State. I do most earnestly hope that the day is not far distant when a diploma in medicine may be issued by our State University, and that it will command as much respect and be as good a passport in the profession as a diploma from any other institution in the world. Until we do have a university equal to any in the world, the hopes of the founders of our State will not have attained full realization.

The President replied in fitting terms, and after the roll had been called resolutions of sympathy for the Nestor of the profession, Dr. Ashbel Smith, in his serious indisposition, which also expressed the hope that he might soon be restored to health and usefulness, were adopted by a rising vote.

### *The President's Recommendations.*

The President then read his recommendations to the Association, which included a proposition for the collective investigation of disease founded on that adopted by the British Medical Association, and suggestions in regard to the immigration of the defective class, the committee on publication, and the subject of trained nurses. He then alluded to the proposed laws to regulate the practice of medicine, and establish a State Board of Health, which, he said, had not been permitted even a decent or respectful hearing in the Legislature, but in hot and inconsiderate haste were "hurried to the guillotine and buried in the tomb of the Capulets, unwept, unhonored, and unsung."

The following gentlemen were appointed to serve on the Judicial Council: Drs. Burroughs, Lynn, Saunders, Knox, Rutherford, Thompson, Buchner, and Burts; after which the President announced the Chairmen of Sections, as follows:

*Practice of Medicine*—Dr. J. C. Loggins, Ennis.
*Obstetrics*—Dr. W. A. East, Hallettsville.
*Surgery*—Dr. W. A. Archer, Houston.
*Medical Jurisprudence and Chemistry*—Dr. R. P. Tally, Belton.
*State Medicine*—Dr. F. E. Daniel, Austin.
*Gynæcology*—Dr. J. W. Willis, Waco.
*Ophthalmology*—Dr. R. H. Chilton, Dallas.
*Dermatology*—Dr. H. L. Taylor, Waco.
*Medical Botany*—Dr. A. D. Durroughs, Lovelady.

Among the papers read at the afternoon session were the following: The Use of Iodide of Potassium in Typho-Malarial Fever, by Dr. O. L. Williams; The Therapeutic use of Salix Nigra, by Dr. E. T. Payne; and Licurgus and Hippocrates, by Dr. L. C. Smith; in which the author took ground against the regulation of the practice of medicine by the State, and which provoked a prolonged and spirited discussion. During this session a congratulatory despatch was sent to the Texas Veteran Association, at Sherman, and a number of newly elected members were announced.

## SECOND DAY—WEDNESDAY, APRIL 22.

### *Report of the Committee on Legislation.*

The Committee on Legislation, Dr. Cupples, Chairman, filed the following report:

*To the President of the Texas State Medical Association:*

Your committee on Legislation have the honor to report that, after long and careful deliberation, preceded by the collation of all laws in force for the regulation of the practice of medicine in the different States, and in foreign countries, a draft of a bill was prepared and introduced in the Senate. After a most satisfactory and harmonious conference on the part of your committee of the Senate, a few amendments, in no manner affecting the principle of the bill, were made, and it was brought up on its second reading and was most ruthlessly strangled by the majority.

It is well understood that this result will in no way deter the profession of the State and this Association from future efforts to obtain from the Legislature such enactments as may suffice for the protection of the health of our people.

Your committee therefore deem it unwise to enter into a narration of the causes which resulted in the defeat of their endeavors; as it might stir up hostility in quarters where we desire to let it die out, and content ourselves with this statement of facts.

On motion of Dr. Cupples it was resolved that a committee of six should be appointed by the chair to continue the compilation of surgical operations from 1877 to April, 1886, and make their report at the next annual meeting.

### *Amendments to the By-Laws, etc.*

An amendment to the By-Laws was adopted which was introduced last year, and which provided that the Judicial Council shall hereafter consist of twelve members, to be appointed by the Nominating Committee, four to serve for one year, four for two years, and four for three years. The Committee appointed to consider the President's suggestions made a report recommending their adoption. The Secretary's and Treasurer's reports were read and accepted.

### *Papers Read.*

The afternoon session was devoted to scientific communications and discussions, and among the papers are the following: *Obstetric Section*, History of a Case of Sudden Death after Labor, by Dr. J. C. Loggins; A Rare Case of Compound Presentation, by Dr. J. F. G. Payne; Observations on the Delivery of the Placenta in Special Cases, by Dr. S. Burroughs; A Case of Hydatids, by Dr. J. D. Bass. *Surgical Section*, New Operation for Fistula in Ano, by Dr. J. A. Gibson; A Case of Comminuted Depressed Fracture of the Skull, with Symptoms of Compression, by Dr. C. F. Paine; A Case of Incised Wound of the Abdominal Wall and Intestines, by Dr. J. C. Jones; Dementia and Hemiplegia, Resulting from Cerebral Compression, Relieved by Trephining, by Dr. H. W. Moore; Anæsthesia, and the Agents Which Produce It, by Dr. J. B. Stimson.

### *The President's Address*

was delivered in the wing of Pillot's Opera House before a large audience, and was received with many demonstrations of approval. It is to be regretted that lack of space will prevent its insertion in full. Having made some graceful introductory remarks, he gave an interesting history of the Texas Association, and spoke of the manner in which its objects had been carried out. The second object of the Association, as stated in the Constitution, is, "To encourage a high standard of professional qualifications," and, in treating of this, he said:

All physicians who propose to practice medicine should be subjected to an examination, whether in possession of a diploma or not, whether they belong to the regular or irregular profession, or to this or that pathy, this or that exclusive dogma, this or that creed. There are those, no doubt, who would very seriously object to being searched or investigated, but this only augments the necessity for such an examination, and should have no influence when the most sacred interests of the people are involved. It is needless to talk of Jefferson College, or the various universities, when it is known that all the Buchanans are not dead, and that the country is abundantly supplied with colleges of very low standards. If a client should lose an important lawsuit in one of the lower courts of the country, through the ignorance of his attorney, he has the right and the liberty of taking it up to a higher tribunal. Not so with the unfortunate, heart-broken man or woman who has sustained the loss of a bosom companion, or an idolized child, through the ignorance of some quack doctor. The sorely bereaved can appeal to no higher court on this earth. And yet, strange though it may appear, the legal profession are required to undergo an examination in open court before they are permitted to practice the law.

The third object of our Association, he said, is "to encourage a high standard of ethics." Our lex scripta is nothing more or less than a formulation of the lex non scripta to be found within the heart of every educated gentleman and true disciple of Æsculapius. There seems to be a strong tendency on the part of too many to drift into a kind of trade very soon after entering the profession—a course so derogatory to the dignity and the honor of our high calling. We find them resorting to ways and methods to secure public favor which are of very doubtful propriety. They will have it ordained for others to trumpet their claims to patronage, even through the secular press, if no other channel presents itself; and, failing in that, they have been known to laud their own superior qualifications and attainments. The index finger of the physician is too often recognized in the columns of the secular press. If a doctor perform an operation, or successfully aid nature in effecting a cure worthy of record, and desire it made a matter of record for the benefit of those who practice medicine and surgery, it would be more ethical and appropriate to select the columns of some medical journal, and not the columns of the secular or religious press. The graduate of a reputable medical college who will so far forget his alma mater, so far depart from our written Code of Ethics, or from the unwritten code ever found about an honorable gentleman, as to practically barter his diploma for a trade-mark, is unworthy the name of doctor, and ought not so to be recognized. But unfortunately the violation of our ethics is not always confined to the class alluded to. Many who occupy high places are ready to censure those far below the mountain tops and in the humbler walks of professional life, for very much smaller violations of the code.

In speaking of the constant advance being made in medicine and sanitary science, he said:

If we would make sure and true progress, we must be exceedingly careful to keep all the old truths and at the same time equally as particular to accept all the new. The constant addition of the one to the other constitutes genuine progress. We have a few fossilated specimens in our ranks who are unwilling to part company with notions and opinions long since obsolete or exploded, and who seem to put forth no effort to keep pace with the rapid progress of the profession. While this is true, there is another class, equally as dangerous, who are too ready to surrender truths venerable by the lapse of ages, and that have served them faithfully and satisfactorily, in order to accept some unestablished theory or opinion, simply because the one is NEW and the other OLD. Not content "to let well enough alone," they seem anxious to throw aside theory and practice approved and sanctioned by centuries, simply to devise some new notion or plan, in the hope of bringing themselves into more prominent notice, and thereby acquire a cheap additional notoriety, if not before the profession, at least among the more credulous and ignorant of the laity. Gentlemen, this is not genuine progress; on the contrary, it is one of the worst forms of quackery. It has been well said: "When the people become sufficiently enlightened to detect ignorance and imposture—quackery and charlatanism, both inside and outside the profession, will have had their day, and higher medical education will flourish." And it may be remarked in this connection with fully as much truth and force, that, until the majority of our Solons are selected from such an enlightened people, there will never be a law enacted to regulate the practice of medicine or to establish a State Board of Health worth the paper upon which either may be printed. It is too late for the generation just passing away, or even the one now in its meridian height, to accomplish the great and beneficent work contemplated by legal hygiene and sanitation. It will devolve upon the rising generation to do that which the present and the past have almost wholly failed to effect. Physiology, or the science of life, hygiene, or the laws that govern health, must be thoroughly taught in all the schools. When this is done and the law-making power is derived from the people thus educated, there will be no call or need for missionaries from the State Medical Association to the Texas State Legislature. The history of the Texas State Medical Association has been a history of continuous, persistent, intelligent effort to induce our law-makers to enact a law to regulate the practice of medicine, and also to establish a State Board of Health, not for the protection of the profession, but in the interest of the people; but the history has been one of signal failure; yea, more, we are ashamed to confess, it has been treated with ridicule and contempt.

## THIRD DAY—THURSDAY, APRIL 23.

### *Committees Appointed.*

Several committees were announced, among which were the Committee on the Collective Investigation of Disease, Dr. Burroughs, chairman; the Committee on Report on Surgery, Dr. Cupples, chairman; and the Nominating Committee, Dr. Burts, chairman.

### *Papers Read.*

Among the papers read at this session were the following: Reflex Irritation from Hypertrophy of the Labia Minor, by Dr. Gwynn; two papers on the Use of Cocoaine, by Drs. Hall and Chilton; Some of the Causes of Disease of the Heart, by Dr. Goldman; Gelsemium, by Dr. Creath; Observations on the Influence of the Climate and Mode of Living of the People of Northwestern Texas, in the Production and Modification of Disease, by Dr. Stout; Report on Cases of Spider Bite, by Dr. Ramsdale; Mineral Waters, by Dr. Willis; Case of Diffused Pulmonary Gangrene, by Dr. Weatherford; Post-Nasal Catarrh, by Dr. Salm; The Operative and Medicinal Treatment of Pterygium, by Dr. Chelton; Trichiasis and Districhiasis, with Treatment by Electrolysis, by Dr. Briggs; and Bromide of Potassium in Obstinate Vomiting, by Dr. White.

### *Gaillard's Medical Journal.*

On motion of Dr. J. Q. Smith, a resolution was unanimously adopted, expressing sympathy for the widow of the late Dr. E. S. Gaillard, in her bereavement, and calling upon the members of the Association to give their cordial support to the journal founded by her distinguished husband, in the publication of which she is now engaged.

### *Medical Legislation.*

Resolutions are adopted by a rising vote, indorsing the action of the Committee on Legislation, expressing the thanks of the Association for fidelity and zeal displayed by it, and providing for the appointment of a special committee, with representatives from every county represented in the State Association, to canvass the members of the regular profession throughout the State, with the view of bringing about a unanimity of sentiment in regard to the subject of medical legislation.

### *Election of Officers.*

The Nominating Committee announced the following list of officers for the ensuing year, who were afterwards duly elected: President, Dr. E. P. Becton; First Vice-President, Dr. R. Rutherford; Second Vice-President, Dr. John C. Jones; Third Vice-President, Dr. S. Burroughs; Secretary, Dr. W. J. Burt; Treasurer, Dr. J. Larendon; Judicial Committee, Drs. Oliver, Archer, Tyner, and J. Jordan, to serve for three years; Drs. Salm, Downman, Paulus, and Tally, to serve for two years; Drs. Ford, Garnett, Cummings, and H. W. Moore, to serve for one year. The following are the chairmen of the various sections: Practice and Materia Medica, Dr. W. L. Barker; Obstetrics, Dr. C. C. Francis; Surgery, Dr. W. J. Burt; Medical Jurisprudence, Dr. R. P. Tally; State Medicine and Public Hygiene, Dr. George Cupples; Gynæcology, Dr. J. F. G. Paine; Ophthalmology, Dr. R. H. Chilton; Dermatology, Dr. F. E. Daniel; Medical

Botany, Dr. Russell; Electro-Therapeutics, Dr. W. T. Baird. The Committee on Legislation consists of Drs. Cupples, Tyner, and McLaughlin, who have the privilege of selecting three additional members. The names of forty-five delegates to the American Medical Association were announced. Dr. T. C. Osborne, formerly of Alabama, was elected an honorary member. In seconding his nomination, Dr. H. P. Downman pronounced an eloquent eulogy on the venerable physician. Dr. Loggins read the necrological report for the past year.

### *Concluding Ceremonies.*

Drs. Cupples and Chilton were appointed a committee to inform the President-elect, Dr. Becton, of his election, and escort him to his seat; and, on reaching the platform, he returned his thanks in appropriate terms for the honor conferred upon him. Before leaving the chair, the retiring President, Dr. Ghent, made a stirring and humorous speech, which was loudly applauded. On motion of Dr. Cupples, a resolution of thanks for the admirable manner in which he had performed the duties of his honorable office was tendered to Dr. Ghent, and, after the passing of the other customary votes of thanks, the Association adjourned to meet at Dallas on the third Tuesday of April, 1886. In the evening a ball and supper were given the members of the Association at the Armory Hall of the Market House.

## ORIGINAL CORRESPONDENCE.

### ON THE BUTTON-HOLING OF THE FEMALE URETHRA AS A PRINCIPLE OF PRACTICE.

*To the Editor of Gaillard's Medical Journal*—

SIR: In the March issue of your journal appeared a *résumé* of an article in the *Maryland Medical Journal*, entitled "Recent Progress in the Diagnosis and Treatment of the Diseases of the Female Urethra," in which the teachings of Dr. Emmet are presented in the strongest possible light of commendation, without the slightest reference to the literature of the subject, and from which the reader is left to infer that the subject has no literature, or rather had remained in complete obscurity, so far as the "profession at large" was concerned, until Dr. Emmet suddenly lifted it into the light of day.

From this *résumé* the object of the writer is apparent, to wit—to emphasize the importance alone which he attached to Dr. Emmet's views upon certain hitherto neglected points of practice, especially the button-holing of the urethra, for prolapse of its mucous membrane, as set forth in the third edition of his book on the Principles and Practice of Gynæcology, which appeared in the autumn of last year.

While such a review of the subject does not actually charge ignorance on the part of previous writers, still it must be regarded as a manifest injustice to them, simply because they are not allowed to speak; though it is true that an author has the right, if he chooses, to embody his own individual experience in a book, and present it to the public, to the almost total exclusion of the contributions of his predecessors and cotemporaries, as Dr. Emmet has done to a very great extent, and in that way encompass them with a larger show of research and originality than they may be entitled to.

The writer of the article in question, whether prompted from motives of fitness, duty, ambition, or whatever other incentive, although unacquainted with the subject, serves up a sort of *ragout*, flavored to suit the palates of the benighted "profession at large," for which he evidently has great regard, as shown by his keen sense of taste, in supplying the much-needed knowledge upon the process of button-holing the urethra. But this is not truth; neither is it conducive to the advancement of "the profession at large," for which so much interest is manifested, nor does it comport with the highest aims and requirements of scientific investigation.

For my part, as one of "the profession at large," I do not share with Dr. Emmet his high estimate of the value attached to the button-holing of the urethra for prolapsus of its mucous membrane; nor would it seem that he is individually justified in attaching so much importance to the procedure, having, in his exceptionally large experience, met with it only once where it extended to the entire canal.

As to any superior advantages belonging to it over the old method of snipping off longitudinally hypertrophied folds of mucous membrane sometimes found just within the meatus urinarius, as taught by Sir Charles Mansfield Clark long before Dr. Emmet was born, I fail to appreciate them, to say nothing of the inconveniences and sometimes difficulties and dangers attending the closing of this so-called button-hole, made just behind the meatus urinarius. I say difficulties and dangers, because the structures at the point of election are occasionally exceedingly thin, and the coaptation and closure of the edges of which require more skill than "the profession at large" can be supposed to always have. I have myself lately seen three button-holes in the locality pictured by Dr. Emmet in his book, in all of which there was complete incontinence of urine, arising partly from the overstretching of the urethra for purposes of exploration, and partly from the cutting away of the tissues in unsuccessful attempts to close the openings; from which it would appear that the closure of such openings in the urethra, as were said to have "been performed by the house surgeons in the Woman's Hospital, and given them for practice as one of the simplest," is far from being a simple affair. I have only to say that, after thirty odd years of observation and experience in such matters, I have yet to meet with my first case of the entire prolapsus of the urethra; and from my knowledge of the anatomical structure of the canal, I have no reason to believe that I shall in the future be any more fortunate, or unfortunate, as it may be considered. Should it fall to my lot, however, to meet with such a case, I would feel myself quite as competent to drag the prolapsed mucous membrane through the meatus urinarius from the upper extremity of the canal and cut it off, as I would through the so-called button-hole made just behind the orifice. Besides, where is the advantage of a nicely made button-hole over an ordinary round opening at the same site, which I commended thirteen years ago (1872) for the drainage of a hypertrophied urethra or urethrocele? The latter is a term which I coined, and gave to this lesion at that time in a paper which I had the honor of reading before the Medical Society of the State of New York. (See Trans.) I then described the lesion at length in its relations, particularly to cystitis and ulceration and disintegration of the mucous coat of the bladder, and designated it "tapping of the urethra." Dr. Emmet does not show the slightest recognition of my priority respecting this point in any of the editions of his work, although he adopts it as a valuable principle of practice, as well as my addition of the term urethrocele to the nomenclature of this class of diseases.

But, again, as to the procedure of button-holing the urethra in order to draw out and cut off the thickened mucous membrane, always found, according to my observations, just within the meatus urinarius, I do not see why the old method, taught by Sir Charles Mansfield Clark, would not be just as convenient, thus placing the tissues in a state of drainage, so to speak, such as I insisted upon by "tapping" the canal in cases of urethrocele.

Should I now, however, meet with a case of prolapse of the entire mucous membrane of the urethra, protruding through the meatus urinarius in great folds, and it should be thought desirable to draw it from the upper part of the canal (the forbidden limits of the button-holing process), or for that part of "tapping," I would most unquestionably make an opening in the trigone of the bladder at its junction with the urethra. In this way I should expect, by putting both the urethra and bladder at complete rest, to accomplish the desired result of a cure, without further ado concerning the membrane protruding from the meatus. Should this fortunate result, however, not be secured in due course of time when it should become necessary to close up the artificial urethro-vesico-vaginal fistule, I would then draw the prolapsed membrane of the urethra towards the bladder, instead of towards the button-hole just behind the meatus, and then cut it off to the exact extent required to free the canal from obstruction. Should there be a redundancy, also, of mucous membrane on the vesical side of the artificial opening, I would draw this out likewise, and cut it off; thus leaving a free and unobstructed passage for the urine both in the urethra and bladder when the cure was completed. This would all be in strict accord with the performance of the physiological functions of both structures. I should expect by this procedure at least to secure one advantage, if no other, namely, the election of a more eligible site as regards the abundance of vesical tissue for *experimental operations*, than upon the urethra, which is *less suited*, from the more delicate nature of its structure and functions, for a similar purpose.

In conclusion, I would say that neither do I endorse Dr. Emmet's mode of operating for incontinence of urine, arising from over-stretching and paralyzation of the urethra, nor admit his claim of originality in the adoption of the procedure, as based on the case of Lizzie Chatfield, recorded in the *New York Medical Journal*, August, 1881, and in the last edition of his book. All the facts pertaining to this case I hope soon to submit to the profession, as a defense of my claims of originality in this procedure.

Respectfully yours,

New York, May 12, 1885. NATHAN BOZEMAN.

## REVIEWS.

A GUIDE TO THE DISEASES OF CHILDREN. By JAMES FREDERICK GOODHART, M.D., F.R.C. P., Assistant Physician to Guy's Hospital, and Lecturer on Pathology in its Medical School; Physician to the Evelina Hospital for Sick Children. Revised and edited by LOUIS STARR, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania; Physician to the Children's Hospital, Philadelphia. With Formulæ. Philadelphia, P. BLAKISTON, SON & CO., 1885. Pp. 738. Price: Cloth, $3.00. Sheep, $4.00.

This new work is to be welcomed as a really valuable contribution to the interesting subject of diseases of children, which, as long as the human family continue to carry out the injunction given to Noah and his sons, "Be ye fruitful and multiply; bring forth abundantly in the earth, and multiply therein," must always claim an important share of the attention of every general practitioner of medicine. As is stated by the American editor, who, by his attainments, his ample experience, and his special studies in the department of pediatrics, is admirably qualified to perform in a satisfactory manner the task which he has here undertaken, it is the author's evident intention that this work shall cover the hitherto unoccupied ground between the too brief handbook on the one hand and the exhaustive treatise on the other. It has been the aim of the editor, through his experience of the wants of junior practitioners and students, to further this object; and no one can doubt, after even a cursory perusal of the work, that he has added—and this in a judicious and unostentatious manner—very greatly to its practical value.

The author, as one would naturally infer from his occupying the position of lecturer on pathology in such an institution as the Guy's Hospital school, is recognized as an authority in this department of medical science; but in writing this book he has understood perfectly well, and, what is more to the point, has succeeded in practically dealing with the subject accordingly, that in the diseases of children pathology must always occupy a position of minor importance as compared with certain other features belonging to them. Almost his opening sentence is, "By the pathologists, indeed, it may well be doubted if any valid reason can be given for separating diseases of children from others, for there are but few morbid changes formed in childhood that are not to be seen at one time or another in the bodies of adults." It is from a clinical point of view that the work is especially valuable and worthy of commendation; and it is from his own rich stores of experience, rather than from the dicta of other writers (although he has not neglected to give the latter due weight, especially in regard to mooted points as they have arisen from time to time in the progress of the work) that, in the main, he has derived the facts upon which are based the opinions expressed by him. But, while he has not yielded to the temptation which was so powerful a one in his case, of giving too great prominence to pathology, he has not, on the other hand, gone to the opposite extreme of slighting an element which, in diseases of children, as in all others, must of course constitute an essential point in any adequate comprehension of their character and necessities.

The scope of the work is a very wide one, taking in the entire range of the affections of infancy and childhood; and, while many of the subjects are necessarily treated in a very brief way, the essentials of their characteristics and the most satisfactory manner of dealing with them are given in a graphic and lucid manner. The introductory chapter is devoted to a consideration of the general examination and treatment of children. In regard to the latter he says, that, "after all, the dosage of children is a matter which, if stated with precision in a posological table, is never handy for reference, and is hardly reliable if it be. With one or two exceptions, every one must feel his way." But while experience has shown that the tolerance of children, in the case of certain drugs (notably as to belladona and arsenic, as the author points out), is very remarkable, it is probably well that the student should have, as the editor suggests, some such rule as that of Cowling as a guide. The dose of any remedy given can be commenced in accordance with this, and then afterwards, if necessary, be increased until the desired effect is produced.

Then follows a chapter on dentition, and one on the diet of children in health; after which the diseases of the digestive system are naturally taken up. There are forty-eight chapters altogether in the book, and among them are ones on intussusception, malaria fever, disease of the liver, diseases of the spleen, diseases of the genito-urinary organs, intracranial tumors, infantile syphilis, diseases of the skin and disorders of movement—including pseudo-hypertrophic paralysis, progressive muscular atrophy, facial paralysis, hemiatrophia facialis, internal strabisums, nystagmus and torticollis. As a sample of the author's philosophical and comprehensive way of looking at the matters of which he treats, as well of his forcible, terse, and attractive style, it may prove of interest to quote a few passages from the section on nocturnal enuresis, especially in view of the fact that Professor J. Lewis Smith has just read before the New York County Medical Association an elaborate paper on this subject, which will shortly be published in the *Archives of Pediatrics.* "There are few conditions which require more careful investigation than this, and few in which such a variety of circumstances may conspire to bring it about. Granting that it depends upon a nervous fault, the results of treatment would seem to show that sometimes it is due to hyper-sensitiveness of the center, sometimes to deficiency of the natural delicacy of perception, either on the part of the lumbar cord or the higher centers to which it should transmit its own knowledge.

"How many other consideratons also does the disease entail! In some cases the constitutional build of the patient must be considered; the sleeping habits of the nervous system; the question of developing sexual sensation; the condition of prepuce, urethra, rectum; the possibility of the existence of local disease; the presence of ascarides; and, in confirmed cases, the question of habit. The mere mention of all these things will be sufficient to show that whoever will treat enuresis with success must be prepared for a preliminary inquiry of a somewhat complicated nature.

"After saying this much, it will not be expected that I should advise the reader to hit out at random with belladonna, or bromide of potassium, or chloral. Each case must be investigated carefully, and treated accordingly." After referring to phimosis and local congestion, he goes on to say: "In other cases the tone of the nervous system is at fault, and during the night there is a general or local erethism of the nervous centers which leads to this spasmodic discharge. This state of the nervous centers is sometimes constitutional and closely associated with rheumatism. In this case it goes with, or is allied to, such nervous disorders as nightmare, somnambulism, possibly even epilepsy. In other cases this nervous erethism is dependent upon sensations which have their origin in the developing sexual center; and unquestionably there is a form of nocturnal incontinence which replaces the seminal emissions of the mature organism. Allow this, and how complex the question becomes. Sometimes there is the low tone and inbred sensation; sometimes the sensations may be called into being by external circumstances, such as a too hot or too comfortable bed; sometimes, may be, there is some local peripheral excitement—a long prepuce, or an over-acid urine, for example. In some children, again, it seems that sleep is too sound, and secretion too rapid; and the reflex center, uncontrolled, acts in accordance with its natural habit, and the urine is passed into the bed.

"Thus, in enuresis, very much the same questions come up over again that have already been discussed in connection with the gastro-intestinal derangements of infants. A little physiological reflection, if it does not make the whole subject clear, at any rate leaves one with the comfortable opinion that he knows something about it, and with definite aims in the treatment of a somewhat mixed class of cases."

In the appendix are a considerable number of generally excellent formulæ, which include many new remedies that have been found by experience to be really of service, as well as directions for peptonizing milk for bottle-fed and delicate children, and which cannot but prove very acceptable as guides to the inexperienced practitioner, who is often puzzled in prescribing for young patients.

On the whole, therefore, "Goodhart's Diseases of Children" can safely be pronounced an original work of conspicuous merit.

MODERN THERAPEUTICS OF THE DISEASES OF CHILDREN, WITH OBSERVATIONS ON THE HYGIENE OF INFANCY. By JOHN EDWARDS, M. D., Editor of *Annals of Hygiene*, Associate Editor of the *Medical and Surgical Reporter*, Author of "Bright's Disease and its Treatment," Fellow of the College of Physicians of Philadelphia, etc. Philadelphia: D. G. Brinton, 1885, pp., vii.—346.

This is one of the well known "Modern Therapeutics" series, inaugurated by the late Dr. George H. Napheys, the first of which, on Medical Therapeutics, has reached an eighth edition; the second, on Surgical Therapeutics, a seventh edition, and the third, on the Therapeutics of Gynæcology and Obstetrics, edited by Dr. Wm. B. Atkinson, Permanent Secretary of the American Medical Association, a second edition. As the editor states in the preface, no similar work of anything like the extent of this has ever been published devoted to this particular field, the purpose of the book being to present in a concise manner a complete epitome of the results of the modern applications (in its wider sense) to the diseases of children, derived from the published details of treatment as practiced by the most eminent specialists in this branch, both American and foreign. To accomplish this purpose in a satisfactory manner has been a task of no ordinary magnitude, necessarily involving, as it has, the expenditure of a vast amount of trouble and time, in order that no available source of information in the field of pediatrics should be left unexplored. The editor has derived his varied and valuable material not simply from formal text-books and elaborate monographs, but also from the whole range of current periodical literature; and the thorough and conscientious manner in which he has performed his difficult task is deserving of the highest commendation.

As a rule, the methods of treatment in the various affections considered are brought fully up to date, as, for instance, the use of bichloride of mercury in croup by Dr. Pepper, and afterwards by Dr. Jacobi, and of the benzoate of soda in the summer diarrhœa of children, based on the hypothesis of the parasitic origin of the disease, by Dr. Guaita, of Italy. In the section on artificial feeding of infants, however, we find that the views of Professor Leeds, of the Stevens Institute of Hoboken, which are quoted, are those expressed by him in 1883, before he had employed pancreatinized milk in this connection. A few months since Prof. Leeds, who, as Dr. J. Lewis Smith in a recent article says, is probably more competent to express an opinion in infant dietetics than any other American scientist, since he has made more analyses of human and animal milk and of the many infant foods than any other chemist, suggested the following formula as a substitute for mother's milk:

1 gill of cow's milk, fresh and unskimmed.
1 gill of water.
2 tablespoonfuls of rich cream.

200 grains of milk sugar.
1 ¼ grains of extractum pancreatine.
4 grains of sodium bicarbonate.

"Put this in a nursing bottle; place the bottle in water made so warm that the whole hand cannot be held in it without pain longer than a minute. Keep the milk at this temperature for exactly twenty minutes. The milk should be prepared just before using." This has since been further improved upon by Prof. Leeds, until the "humanized milk" as now prepared from the peptonized powder of Messrs. Fairchild Brothers and Foster is almost absolutely identical in composition with that of the breast, as will be seen from the following comparison:

| | Analyses of 80 samples of Woman's Milk (Average). | Analyses of "Humanized Milk." |
|---|---|---|
| Water - - - - | 86.73 | 86.2 |
| Fat - - - - | 4.13 | 4.5 |
| Milk Sugar - - - | 6.94 | 7.00 |
| Albuminoids - - | 2.00 | 2.00 |
| Ash (Salts) - - - | 0.20 | 0.3 |

Still, it is but just to the editor of the present work to say that a late article in the *Archives of Pediatrics* on the summer diarrhœa of children, by Dr. J. Lewis Smith, in which the latter urges the superiority of pancreatinized milk, when the infant cannot be nursed at the breast, is freely quoted.

HUMAN OSTEOLOGY: COMPRISING A DESCRIPTION OF THE BONES, WITH DELINEATIONS OF THE ATTACHMENTS OF THE MUSCLES, THE GENERAL AND MISCROSCOPIC STRUCTURE OF BONE AND ITS DEVELOPMENT. By LUTHER HOLDEN, ex-President and Member of Court Examiners, of the Royal College of Surgeons of England; Consulting Surgeon of Saint Bartholomew's and the Foundling Hospitals: assisted by JAMES SHUTER, F. R. C. S., M. A. M. B., Cantab., Assistant Surgeon to the Royal Free Hospital; Late Demonstrator of Physiology and Assistant Demonstrator of Anatomy at Saint Bartholomew's Hospital; with numerous illustrations. Sixth Edition, New York; William Wood & Co., 1885, pp. ix.—286. (Wood's Library of Standard Medical Authors.)

In speaking of this number of Wood's Library, certainly no one can hesitate to acknowledge that it is the work of a "Standard Author." Such a standard work requires no extended notice, as it appears from time to time in a new edition. It became from the first the highest authority on the subject of which it treats. Although the work was previously well-nigh perfect in its way, the present edition is rendered still more useful and interesting by the addition of a number of notes on comparative osteology. Like its predecessors, it is profusely illustrated; but while the principal plates, as they are given in the volume before us, are, as a rule, quite satisfactory, the minor cuts are by no means always of the highest order of artistic excellence.

KIRKE'S HAND-BOOK OF PHYSIOLOGY, by W. MONANT BAKER, F. R. C. S., Surgeon to St. Bartholomew's Hospital, and Consulting Surgeon to the Evelina Hospital for Sick Children; Lecturer on Physiology at St. Bartholomew's Hospital and late Member of the Board of Examiners of the Royal College of Surgeons of England, and Vincent Dormer Harris, M. D., Lond., Demonstrator of Physiology at St. Bartholomew's Hospital. Eleventh Edition, with nearly 500 illustrations. New York, William Wood & Company, 56 and 58 Lafayette Place, 1885. 2 vols. pp. 373 and 378.

Kirke's "Hand-Book" has been a popular text-book on physiology for so many years that its eleventh edition hardly calls for an extended notice, much less a review. It is enough to say that the editors, who are now practically the authors, have maintained the high character of the work and have kept fully up to the times the science of physiology, which has made such vast progress within the last few years. While it has this merit, it has been enriched by a number of new and elegant illustrations and useful tables; and, fortunately, it is as well adapted to the use of the American as the English student and practitioner. Its value is well attested in this country by the success of several editions published by Lea, of Philadelphia, and, more recently, an edition, the eleventh, imported in sheets and bound and published by Blakiston, also of Philadelphia.

The reprint which is the subject of this notice forms a part of "Wood's Library of Standard Medical Authors," series for 1885, twelve volumes.

While we intend to confine our criticisms mainly to the mechanical execution of the two volumes before us, there are certain methods employed in the publishing and advertising of the so-called "Library" which are fair subjects for comment. A practitioner willing to entrust the selection of a library to Messrs. William Wood & Co., at the insignificant price of $15 a year, payable in advance, will have no reason to complain of the quantity and general quality of the works chosen for him. Of the twelve volumes for the year 1885, ten are excellent treatises by foreign authors (nine English and one French), and two are the original productions of American writers on subjects of present interest. Many of the English books are certainly "standard" works, having passed through several editions. With the current medical literature of Great Britain to choose from, publishers unrestrained by an international copyright or by the unwritten law that the republication of an English book gives immunity from American competition with the same book, should certainly be able to sell twelve volumes a year, of about 350 pages each, for the sum of $15, provided that all the volumes be sold, the more popular works securing a sale for those of less interest. Indeed, it is not difficult to see how the "Library" has become a financial success, although the impossibility of producing any volume separately renders text-books out of place, and subscribers are compelled to take many books which they do not want; but the pretense that subscription to the "Library" affords an unusual opportunity to obtain good books "at such a nominal price" is as absurd as the statement by the publishers that the books "are *better printed* and *bound* than most of the high-priced editions of other works usually sold," and that, "in cases of reprints, the engravings are photographic facsimilies of the original, and *absolutely identical.*"

As far as "Kirke's Hand-Book" is concerned, the splitting of the work, which makes, in the original, a single volume, is inconvenient, and is evidently done to meet the necessity of furnishing to subscribers twelve volumes for $15. The print and paper are fair, but the mechanical execution of the engravings is simply execrable, and their general worthlessness for purposes of illustration can be fully appreciated only after a comparison with the original. No author of a reputation which enables him to secure proper publication of his works would permit such caricatures to appear under his name. The editions which were published by Lea were hardly as elegant as the English, but they were by no means discreditable; and the original sheets imported by Blakiston, for which the authors presumably received compensation, are bound in this country into a handsome volume. The binding, however, of the "Library" is tasteful, and fair at the price; still, it is evident that a very moderate sale of the books as produced, no copyright being paid to authors, must secure a good profit; and the publishers have no claim, resting upon the success of their enterprise, to be regarded as philanthropists. While many are undoubtedly attracted by the "nominal price" of the "Library," it is probable that buyers of medical books would do quite as well in purchasing, at their own convenience, such works as they need, properly manufactured and sold in the ordinary way. It is fortunate that American "Standard Medical Authors" are protected from the republication of their books in the cheap form which seems necessary to the commercial success of Wood's Library.

Finally, it is proper to suggest that the profession can scarcely be expected to be pleased in receiving, with their volumes of the "Library," a slip-advertisement, one side announcing a new book by a "Fellow of the Massachusetts Medical Society," and the other, a special treatise by a well-known irregular practitioner, although several editions of the latter have been favorably reviewed in the columns of the medical journal issued by the publishers.

THE PHYSICIAN HIMSELF, AND WHAT HE SHOULD ADD TO HIS SCIENTIFIC ACQUIREMENTS IN ORDER TO SECURE SUCCESS. By D. W. CATHELL, M.D., Late Professor of Pathology in the College of Physicians and Surgeons of Baltimore. Fourth Edition. Enlarged by the Addition of Nearly Three Hundred New Suggestions. Baltimore: Cushings & Bailey. 1885. Pp. 284.

The fourth edition of this book shows evidence of some revision and improvement, but the essential quality of the book remains unchanged. There is evidence throughout its pages of a radical spirit of selfishness, disingenuousness, and policy which all must admit, and which is certainly unworthy of the medical profession. Most of the teaching is sensible, many of the directions given are admirable; but the underlying motive is low, and nothing else in all the book is so conspicuous as this, or so revolting to those whose most earnest aspiration for the profession is that it should always be the wisest and the highest in aim, even in the face of misconstruction. The tendency of the book is bad, and it is hoped that the young practitioner, whose wants it is supposed to meet, may have sufficient self-respect to hold himself far above the motives suggested for certain courses of action, even while acknowledging that the courses indicated are wise and proper.

## MISCELLANEOUS.

A SUCCESSFUL CASE OF MUSCLE GRAFTING.—There has lately been done at Bellevue Hospital, in this city, an operation of this kind which is said to have been the first ever performed in this country. In July, 1884, a young woman employed in a laundry got her right hand caught in a clothes mangle, and although the hand itself was not seriously injured, a large mass of the muscular tissues of the fore-arm was torn away, since which time the arm below the elbow has been practically useless. Last month at Bellevue an incision was made in the fore-arm, the skin laid back, and the ends of the torn muscles freshened, so as to present a raw surface; when a piece of muscular tissue about four inches in length, cut at the time from the hind leg of a living dog, was placed in the gap, the skin laid back, and the arm carefully bandaged. Three weeks later, much to the gratification of the surgeons, the patient was able to move her fingers and flex the fore-arm for the first time since the accident, and the expectation is entertained that the injured member will soon be as useful as ever. It is to be sincerely hoped, however, that none of the characteristics of the canine species have been transferred to the young woman through the agency of this interesting operation, for it would certainly be extremely awkward for her if she should in the future be liable to be seized with an irresistible impulse to rush frantically in pursuit of every stray cat that she meets, to hob-nob with strange curs in the middle of the street, to plunge recklessly into horse-troughs and dirty ponds, and (what would, no doubt, be still more embarrassing) to elevate, with diuretic intent, her sinister posterior extremity at every corner or lamp-post that she passed.

CASE OF CÆSARIAN SECTION PERFORMED BY THE PATIENT HERSELF.—The *British Medical Journal* gives an account of this remarkable case, related by Dr. Van Guggenberg at the last annual meeting of the Bohemian physicians at Tetschen: The pains began between September 24 and 25, ceased in the afternoon, and came on again on September 26, when the midwife stated that she felt the presenting head on vaginal examination. On September 27 convulsions came on, according to the patient's account, accompanied by agonizing pain and great distension of the abdomen; the movements of the child ceasing, the pain and distension became so severe that the patient determined to perform Cæsarian section, of which she had heard. She therefore took a razor, and divided the skin slowly; she then made a second and a third incision, and finding the child not yet appearing, made another cut, which caused a large jet of blood to escape, and exposed the placenta, which she removed. One foot of the child came into view, which she seized and pulled upon until the whole of the body came through the wound, the head requiring the execution of all her force; she divided the umbilical cord, laid the child (which she believed to be dead) beside her on the bed, and threw the placenta on the floor. The progress of the case was very good.

PREGNANCY IN A WOMAN FIFTY-ONE YEARS OLD.—Dr. F. N. Burgess writes: "I delivered a woman recently aged fifty-one years, three months, ten days, of a healthy male child. Last confinement, ten years and a half previous." —*New York Medical Record.*

A NEW SECT.—"There is something that has preyed heavily on my mind ever since our engagement, dear," he said, "but I am almost afraid to tell you of it." "What is it, George?" the young woman asked anxiously. "I am a somnambulist." "Oh, is that all?" she exclaimed, with a sigh of relief. "I have always been a Universalist myself, but of course when we are made one I shall expect to attend your church."

"CHARLEY KINGSTON'S AUNT."—It has lately been rumored abroad that the interesting medical novel bearing the above title, and published as "by Pen Oliver, F. R. C. S.," is in reality the work of Sir Henry Thompson. This rumor we can confirm, since we have the means of knowing that Sir Henry, during his last autumn holiday, gave up his hitherto invariable habit of painting a picture (usually for the Royal Academy), and devoted his leisure time to writing a medical story, a self-imposed task which was accomplished during the limits of his holiday.—*Lancet.*

A TENDER INTERVIEW INTERRUPTED.—To those contemplating a voyage to Europe during the coming summer, the following original version of "In the Gloaming," by Mrs. Agnes Storrs Vedder, as sung by her at the second annual picnic of the "Pot Luck Club," is sympathetically commended:

In the steamer, oh, my darling, when the fog-horns scream and blow,
And the footsteps of the steward softly come and softly go,
When the passengers are groaning with a deep and sincere woe,
Will you think of me and love me as you did not long ago?

In the cabin, oh, my darling! think not bitterly of me,
Tho' I rushed away and left you in the middle of our tea;
I was seized with a sudden longing to gaze upon the deep blue sea;
It was best to leave you then, dear! best for you and best for me.

THE ASHES OF A CÆSAR. The urns in which were deposited the ashes of the young Emperor Piso, who, on account of his extraordinary accomplishments, was raised to the imperial dignity by Galba, A. D. 27, and those of six of his family, have recently been discovered in a subterranean chamber at Rome, where some workmen were digging the foundations for a new line of houses just within the modern Porta Salaria. When the owner of the property, says a letter to the London *Times* describing the urns, visited the spot he found that the cinerary urns had all disappeared, excepting one made of rare Oriental alabaster. It had also been opened and was empty. "Where," asked Signor Maraini, "are the ashes that were in these monuments?" "Ashes!" replied the man, as if astonished. "Yes, ashes," repeated Signor Maraini. "Well," he answered, "in truth there were ashes, and a great many of them, but I never dreamed that they were of the slightest importance, and as they were very white and clean I gathered them together into a basket and sent them to my wife to make lye of for her washing." And thus have the ashes of an Imperial Cæsar, adopted by Galba as Tiberius was adopted by Augustus, and accepted by the Senate, been used in this year of grace, 1885, more than eighteen centuries after his death, by a Roman washerwoman to cleanse her dirty linen with, together with the ashes of other members of his family, in whose veins flowed the noble blood of the Crassi and of Pompey the Great. Hamlet traced in imagination the noble dust of Alexander until it was found stopping a bunghole, just as

> "Imperious Cæsar, dead, and turned to clay,
> Might stop a hole to keep the wind away."

But it was reserved for this age of surprises to present the actual fact of a Cæsar's dust being employed for the lye of a Roman woman's washtub.

A REMEDY FOR SLEEPING IN CHURCH.—A friend of faultless spirit, but of an exceedingly immoral orthography, suggests the use of pepper as a preventive of drowsiness during public worship. Admirable! Let it be of the scarlet hue, and put it in the eye freely and without regard to cost. Perhaps a lighted match applied to the end of the sleeper's nose might also have a reviving effect. The best remedy is genuine piety.—*Richmond* (*Va.*) *Religious Herald.*

A SUFFERING PAIR.—Mrs. Mulvaney (the laundress)—Indade, ma'am, and it's miserable I am. I'm but just on me feet wid the pain in me back, an' Jimmy he's as bad off; he has a cough on um that sounds like an empty bar'l. Cough for the lady, Jimmy!—*Harper's Bazar.*

A PUZZLER.—When a baby begins to ask questions, wise men take their departure. A "two-year-old" can run the profoundest scholar to ground in ten minutes. One of them recently examined the eyes of its sister and asked, "Mamma, where does the Lord get his blue dust from?"—*Macon* (*Ga.*) *Telegraph.*

## MEDICAL NEWS.

THE AMERICAN MEDICAL ASSOCIATION.—The Thirty-sixth Annual meeting of the Association was held at New Orleans, April 28, 29, and 30, and May 1, and the following are the most important matters which occupied its attention: Dr. Henry F. Campbell, of Georgia, delivered the President's address. A memorial address upon the late Dr. S. D. Gross, prepared by a special committee appointed for the purpose, of which Dr. Austin Flint was chairman, was read by Dr. T. G. Richardson. Dr. J. S. Billings, U. S. A., read, on behalf of Dr. Flint, the report of the committee on securing an appropriation for a fire-proof building for the Army Medical Museum and Library, announcing that Congress had at last made the requisite appropriation, and that the building would be at once commenced. Dr. H. D. Didama, of Syracuse, N. Y., delivered the address in medicine (which is published elsewhere), and Dr. R. S. Sutton, of Pittsburgh, the Address in Obstetrics, which was entitled, "The Outgrowth of the First Operation of Ovariotomy." Dr. Billings, on behalf of Dr. Flint, chairman, presented the report of the Committee on Organization of the International Medical Congress, which gave rise to a lively discussion, and substitute for a resolution, by Dr. F. E. Daniel, of Fort Worth, Texas, instructing the Committee on Nominations to prepare and present to the Association nominations for the Congress, and its various sections, to the effect that the committee appointed to arrange for the meeting of the Congress should be enlarged by the addition of thirty-eight members, representing the various States and Territories, the District of Columbia, and the army and navy, to be appointed by the chair, and that the enlarged committee should revise, alter, and amend the action of the present committee as it might deem best, which was offered by Dr. J. M. Keller, of Hot Springs, Ark., was adopted by a vote of 131 to 92. It was afterwards amended, on motion of Dr. W. A. Byrd, of Quincy, Ill., so that members from the committee from the States represented at the meeting should be appointed by the delegates, and those from States not represented to be appointed by the President. Dr. N. S. Davis, chairman of the special committee to report explanatory resolutions of certain sections of the Code of Ethics, submitted the following, which was unanimously adopted:

*Wheras*, Persistent misrepresentations have been and still are being made concerning the provisions of the Code of Ethics of the American Medical Association, which many, even in the ranks of the profession, are led to believe—as, for instance, that the Code excludes persons from professional recognition simply because of difference of opinion on doctrines—therefore,

*Resolved*, First, that Clause I., Article IV., of the National Code of Medical Ethics, is not to be interpreted as excluding from professional fellowship, on the ground of difference in doctrine or belief, those who in other respects are entitled to be members of the regular medical profession. Neither is there any article or clause in the said Code of Ethics that interferes with the most perfect liberty of individual opinion and practice.

Second, That it constitutes voluntary disconnection, or withdrawal from the medical profession proper, to assume a title indicating to the public an exclusive or a sectarian system of practice, or to belong to an association or party antagonistic to the general medical profession.

Third, That there is no provision in the National Code of Medical Ethics in any wise inconsistent with the broadest dictates of humanity, and that the article of the Code which relates to consultations cannot be correctly interpreted as interdicting under any circumstances the rendering of professional services whenever there is pressing or immediate need of them; on the contrary, to meet promptly the emergencies of disease, of accident, and to give a helping hand, without unnecessary delay, is a duty enjoined on every member of the profession both by the letter and spirit of the entire Code. But no such emergencies or circumstances can make it necessary or proper to enter into formal professional consultations with those who voluntarily have disconnected themselves from the regular medical profession in the manner indicated by the preceding resolution. Adopted.

The Address in Surgery was delivered by Dr. Duncan Grey, of Nashville, Tenn. The Treasurer's report showed that $17,093.26 had been received during the second year of the publication of the journal, and that the provisions made at the last meeting for the increase of membership had added 125 names to the roll. The report of the Committee on Publication, read by Dr. J. M. Toner, stated that they recommended that the publication of the journal should be continued at Chicago, and that they had unanimously requested that Dr. Davis should remain the editor. On motion of Dr. Quimby, of New Jersey, the report was adopted, and a vote of thanks tendered Dr. Davis. On motion of Dr. R. H. Reid, of Ohio, a resolution was adopted, providing that a first and second prize should be offered for the best and second-best paper, showing original research, in each section at the next meeting of the Association. The committee appointed to consider a proposed monument to Dr. Benjamin Rush recommended that such monument should be erected in the city of Washington by dollar subscriptions, and provided for the appointment of a committee to carry out the project. The report was adopted. The Committee on Forensic Medicine was announced as follows: Isaac N. Quimby, of New

Jersey; X. C. Scott, of Ohio; F. E. Daniel, of Texas; J. V. Shoemaker, of Pennsylvania; Eugene Foster and H. F. Campbell, of Georgia. They recommended, after careful consideration of the matter, that a new section should be formed, to be called the Section of Medical Jurisprudence.

The Committee on Nominations reported as follows: For President, William Brodie, of Michigan; for first vice-president, Samuel Logan, of Louisiana; for second vice-president, J. Y. P. Garnett, of the District of Columbia; for third vice-president, Charles Alexander, of Wisconsin; for fourth vice-president, G. W. Peck, of Iowa; for permanent secretary, W. B. Atkinson, of Pennsylvania; for assistant secretary and treasurer, R. J. Dunglison; for librarian, C. H. A. Kleinschmidt, of the District of Columbia. *For Officers of Sections:* Practice of Medicine.—Chairman, J. T. Whitaker, of Ohio; secretary, B. L. Coleman, of Kentucky. Obstetrics and Diseases of Women.—Chairman, S. C. Gordon, of Maine; secretary, —— Paine, of Texas. Surgery and Anatomy.—Chairman, N. Senn, of Wisconsin; secretary, H. M. Mudd, of Missouri. Ophthalmology, Otology, and Laryngology.—Chairman, Eugene Smith, of Michigan; secretary, J. Fulton, of Minnesota. Diseases of Children.—Chairman, W. D. H. Ager, of Tennessee; secretary, W. B. Lawrence, of Arkansas. Oral and Dental Surgery.—Chairman, J. Marshall, of Illinois; secretary, A. E. Baldwin, of Illinois. State Medicine.—Chairman, J. H. Rauch, of Illinois; secretary F. E. Daniel, of Texas. Committee on Necrology.—J. M. Toner, of the District of Columbia. Judicial Council.—R. A. Kinloch, of South Carolina; — — Sanders, of Tennessee; T. G. Richardson, of Louisiana; G. A. Ketchum, of Alabama; George Beard, of West Virginia; J. M. Toner, of the District of Columbia; and A. M. Pollock, of Pennsylvania. The next meeting to be held in St. Louis, the first Tuesday in May, 1886. The Address in Ophthalmology, Otology and Laryngology was delivered by Dr. J. A. White, of Virginia, and the Address in Diseases of Children, by Dr. J. A. Pope, of Texas.

A resolution was offered by Dr. J. B. Roberts, of Philadelphia, from the Section on State Medicine, to the effect that steps be taken to establish in each State a board of medical examiners, whose certificates shall be the only authority to practice in those States. Before the Association adjourned, ex-Presidents Richardson and Toner conducted to the chair the President-elect, Dr. Brodie, who was received with much applause, and made a brief address of thanks.

American Surgical Association.—The sixth annual meeting of this Association was held in Washington, D. C., April 21, 22, 23 and 24, when the papers previously announced were read and discussed. The following officers were elected for the ensuing year: President, Dr. Moses Gunn, of Chicago. Vice-Presidents, Drs. Christopher Johnson, of Baltimore; Thomas P. Russell, of Oshkosh, Wisconsin. Secretary, Dr. J. R. Weist, of Richmond, Indiana. Recorder, Dr. J. Ewing Mears, of Philadelphia. Treasurer, Dr. John H. Brinton, of Philadelphia. Member of Council, Dr. L. McLane Tiffany, of Baltimore. Chairman of Committee of Arrangements, Dr. J. S. Billings, of Washington. Time and place of next meeting, Washington, D. C., on the Wednesday preceding the meeting of the American Medical Association.

Medical Association of Georgia.—The 36th annual meeting was held at Savannah, April 15, 16 and 17. The annual address by the President (Dr. Eugene Foster, of Augusta) was on "The Extent, Causes, and Prevention of Premature Death." It was determined that the transactions of the Association should hereafter be published officially in the *Atlanta Medical and Surgical Journal,* instead of book form.

The following officers were elected for the ensuing year: President, R. J. Nunn, M.D., of Savannah. Vice-President, L. B. Alexander, M.D., of Forsyth, and T. F. Walker, M.D., of Cochran. Secretary, James D. Cray, M.D., of Atlanta. Treasurer, E. C. Goodrich, M.D., of Augusta. Orator, C. W. Hickman, M.D., of Augusta. Augusta was selected as the next place of meeting.

LOUISIANA STATE MEDICAL SOCIETY.—The annual meeting was held at New Orleans, April 21, 22 and 23. The address of the President, Dr. R. H. Day, of Baton Rouge, was on "The Mission and Methods of Medicine." Dr. Samuel Logan was elected President for the ensuing year, and New Iberia was selected as the next place of meeting.

ELECTRO-THERAPEUTIC ASSOCIATION OF THE STATE OF TEXAS.—This Association met at Houston on the 19th and 21st of April. Dr. Baird, of Albany, presided, and papers by Drs. Paine, of Comanche, Williams, of Whitney, and others, were read and discussed.

THE NINETEENTH CONGRESS OF GERMAN SURGEONS met in Berlin, April 8, 9, 10 and 11, Baron Von Langenbeck presiding. Addresses and papers were read by Drs. Volkmann, of Halle; Braun, of Jena; Fehleisen, of Berlin; Maas, of Würtzburg; König, of Göttingen; Gaertner, marine physician; Kummel, of Hamburg; Esmarch, of Kiel; Albrecht, of Brussels, and the venerable President. The most important discussion was that upon resection of the stomach, the principal speakers in which were Drs. Rydigier and Von Hacker, of Berlin.

THE FRENCH CONGRESS OF SURGEONS met in Paris April 10, 11 and 12. It is composed of surgeons not only from France, but from the French-speaking countries, such as Belgium, Switzerland and Canada. The President of this Congress was Prof. Trélat, of Paris, and the Vice President, Prof, Ollien, of Lyons. There are in addition six "*Presidents d' Honneur*," each of whom presided in turn during the services, the actual president meanwhile taking his place in the audience. The number of members now inscribed is 193, of whom 54 are founders. Among the latter are surgeons of Paris and various parts of France, and from Strasbourg, Geneva, Bâsle, Brussels, Copenhagen, and Havana.

THE NIAGARA PARK BILL, which secures a permanent free State park at Niagara Falls, has been passed by both houses of the Legislature and received the signature of the Governor.

NEW YORK HOSPITAL TRAINING SCHOOL FOR NURSES.—The closing exercise of this school was held April 26 There were six graduates, and an address was made by Dr. George L. Peabody.

TENNESSEE STATE MEDICAL SOCIETY.—The 52d annual meeting of this society was held in Nashville April 14, 15, and 16. On the evening of the 14th, in the Hall of Representatives, addresses of welcome were delivered by Gov. Bates and Capt. J. T. Bell, who appeared as the representative of the city government; after which Dr. Saunders, president of the society, delivered the annual address, the subject of which was "The Debt we Owe." Dr. T. L. Maddin was elected President, Drs. S. T. Hardison, J. E. Black and G. W. Drake, Vice Presidents, Dr. C. C. Fite Secretary, and Dr. D. J. Roberts, Treasurer, for the ensuing year. Memphis was elected as the next place of meeting. During the meeting a committee was appointed to report at the next meeting of the society as to the existence of such a fever as Typho-Malarial.

TEXAS MICROSCOPIC ASSOCIATION.—This society was organized at Austin, March 27, with Dr. J. W. McLaughlin as President, Prof. Everhart as Vice-President and Corresponding Secretary, Dr. R. Whitis as Recording Secretary, and Dr. D. J. Cummings as Treasurer. Membership is not confined to the medical profession.

JEFFERSON MEDICAL COLLEGE.—The sixtieth annual commencement of this college was held at the Academy of Music, Philadelphia, April 2, when the degrees were conferred by Dr. E. B. Gardith, the prizes awarded by Prof. DaCosta, and the valedictory address delivered by Prof. Pancoast. The degree of LL.D. was conferred upon Dr. A. Flint, Jr., of New York. The annual address before the alumni was delivered by Prof. J. W. Holland, of the University of Louisville, on the subject "Our Personal Equations." Since then Dr. Holland has been elected professor of medical chemistry and toxicology in the college, Prof. Mallet, who was appointed to the chair in September last, returning to the University of Virginia.

BRITISH GYNÆCOLOGICAL SOCIETY.—This new society was organized in London, March 11, with Dr. Alfred Meadows as President.

CLOSING EXERCISES OF ATLANTA MEDICAL SCHOOLS.—The commencement of the Atlanta Medical College was held March 2, when Dr. J. B. Hawthorn delivered the address to the graduates, and Dr. A. C. Clements the valedictory, and Hon. Albert Cox awarded the prizes. The commencement of the Southern Medical College was held March 4. Dr. J. W. Suggs, Jr., was the valedictorian, and the Rev. Dr. J. G. Armstrong delivered the address to the graduates.

MEDICAL COLLEGE OF INDIANA.—Dr. F. F. Hodges was appointed to the chair of pathology in this institution.

DEATH OF DR. J. H. LOGAN.—Dr. J. H. Logan, Professor of Chemistry in the Atlanta Medical College, died at his home in Atlanta, March 29.

THE UNITED STATES AT THE INTERNATIONAL CHOLERA CONFERENCE.—President Cleveland appointed Dr. George M. Sternberg, U. S. A., delegate from the United States to the cholera conference which meets in Rome May 15.

TESTING CHOLERA INOCULATION.—The papers report that inoculation with cholera virus is being practiced to a large extent at Valencia, Spain.

EPIDEMIC OF TYPHOID FEVER AT PLYMOUTH, PA.—For some time past a very serious typhoid epidemic, with quite a high death rate, has been prevailing at this place, and May 7 a committee of visiting physicians reported that they had discovered a satisfactory explanation of the outbreak. At the headwaters of the mountain stream supplying Plymouth with water is a house in which typhoid fever has prevailed for the last three months. The excreta of the sick were thrown into a privy forty feet from the stream, and were washed into the stream by the March rains. The fever broke out at Plymouth about two weeks after the stream was polluted. By this pollution of the water supply 1,000 persons were poisoned, and about 85 have died with the fever, while other deaths are still occurring.

CEREBRO-SPINAL MENINGITIS IN TENNESSEE.—There is an epidemic of cerebro-spinal fever at Union City, Tenn., and the surrounding country.

DEATH FROM HYDROPHOBIA.—A fatal case of hydrophobia occurred at Georgetown, S. C., April 30. The patient was bitten by a dog, which was killed at the time, on February last; but the wound healed rapidly.

DEATH OF DR. JOHN R. FETWELL.—Dr. John R. Fetwell, of Mobile, Ala., died last month at the age of seventy-four. He was a native of Vicksburgh. During the war he served on Gen. Lee's staff, and was afterwards engaged in torpedo work in Mobile Bay. At the close of the war he went to Texas, and had only recently returned to Mobile. He was a prominent man and held the office of Past Grand Master of Texas.

A YOUNG GIANT.—The giantess who married the giant Patrick O'Brien about a year ago, gave birth, at Jonesborough, Ill., on the 20th of April, to an infant weighing fifteen pounds.

DEATH OF A FAT BOY.—Young Dupee, the fat boy of Webster, Mass., died suddenly May 5. He was in his ninth year and weighed 220 pounds.

STUNG TO DEATH BY BEES.—A prominent citizen of Gordon, Ga., was stung to death on the 5th of May by a swarm of bees which he was attempting to hive.

AN EXCELLENT APPOINTMENT.—The President has appointed Col. Stuart Taylor, the accomplished son of Dr. Isaac E. Taylor, of this city, Naval Officer of Customs, at San Francisco.

THE NEW YORK POLYCLINIC.—The winter session of the New York Polyclinic ends on Saturday May 30. The number of physicians who have attended the clinics since September 22, 1884, is over two hundred. The summer session opens Monday June 1, and will continue to September 12. The following clinics will be held each week: Gynæcology, 11; Diseases of Children, 6; Surgery, 8; Diseases of the Skin, 6; Diseases of the Chest, General Medicine and Diagnosis, 6; Diseases of the Eye, 6; Diseases of the Throat, Nose and Ear, 6; total 50. In addition, a course in urinary analysis will be given, and the laboratory of pathological histology will remain open all summer: while the class will have the opportunity of personally attending obstetric cases.

UNIVERSITY OF PENNSYLVANIA.—The annual commencement of the medical department of the University was held May 1, when degrees were conferred upon 108 graduates.

THE LATE DR. LOUIS ELSBERG.—At a meeting of the Medical Board of Charity Hospital, held April 1, 1885, the following resolutions were passed:

*Whereas*, Our late associate, Dr. Louis Elsberg, has been removed from us by death, therefore,

*Resolved*, That we, the Medical Board of Charity Hospital, express deep regret at the loss of our associate, whose interests in medical subjects and desire to advance medical science, and whose uniformly kind and courteous demeanor toward his patients, as well as colleagues, won our esteem and admiration.

*Resolved*, That we express our appreciation of the services rendered to the hospital by the deceased, and our acknowledgment of his unabated zeal and fidelity in the performance of his hospital duties, when failing health and bodily weakness required freedom from professional cares.

*Resolved*, That the death of Dr. Elsberg deprives this community of one of the most useful citizens, and the branch of medical science which he so successfully cultivated of one of its most efficient promoters and highest authorities.

*Resolved,* That a copy of these resolutions be sent to the family of the deceased and to the medical journals of this city.

(Signed.) J. LEWIS SMITH, M. D. } *Committee.*
WILLIAM T. WHITE, M. D. }

FESSENDEN N. OTIS, M. D. *President.* J. BLAKE WHITE, M. D., *Secretary.*

## EDITORIALS.

PRESIDENT CAMPBELL'S ADDRESS.—The President's address at the meeting of the American Medical Association this year was eloquent and attractive, while at the same time it was largely devoted to a topic of much practical importance. The introduction, treating of the past history and memories, and of the present and future work of the Association, with its long list of illustrious sons, has seldom been equalled for pathos and gracefulness of diction in similar addresses. In it, while paying due honor to the noble dead, he made a forcible appeal for the present recognition of the labors and services of the living. "Must our hearts," said he, "forever yearn and yearn in silence to tell the honor, the reverence, and the love that burns within us? Must our 'Bless you, my brother,' and our 'Well done, good and faithful,' die ever "as a voiceless thought?" Who is it that has fought shoulder to shoulder with another in the veteran grand army of the world's campaigns, and has seen him fall out of the ranks, to rise no more; who is it that has stemmed with another the current of the mighty river of Time, or battled with the waves in the tempestuous ocean of life, and seen him suddenly and forever sink beneath the dark waters, and has not mourned the last word unspoken, and bitterly cried out, 'Too late?' The good-will and the assurance he had been longing to utter have failed of their application, and they remain valueless in his tender heart like 'unused spices' in the hands of loving women at the Saviour's tomb. * * * Again, among this multitude can the anxious eye of friendship, long familiar with their forms, readily search out some in whose breasts not even the burthen of years, or the calamities and casualities of prolonged and laborious lives, could abate the honor and devotion they gave in the heyday of their early prime to this Association—once the child of their trembling hope, now the object of their pride and triumph. Make haste to do honor to all these venerable men, our Nestors—the fathers of our history and the sires of our generation—honor them *now*, while still they walk in and out before you, and among the children of men. Let me voice for this Association, in their living ears and in glad gratulation to-day, the avowal and the eulogy we may haply sob forth in bitter lamentation to-morrow—let us in manly frankness to-day pour into their throbbing hearts some little of the praise and commendation which to-morrow we may have to engrave in tearful sadness on the cold, insensible marble of their tombs."

The following is his tribute of homage to the venerable editor of the Asso-tion's journal: "Once more—and I will still remain impersonal in the familiar sketch I would portray—our eyes may at this moment rest with honoring gaze upon one who at the present time, and before the present generation of laborers in the field, might stand prominent amongst us only by the encouraging and ever-inspiring magnetism of his presence, and by the stupendous and self-sacrificing labor in which he is ever willing to engage. He labors now as he labored two-score years ago, well entitled to the honored name of "the father." No one of the sons of this Association can excel him in watchfulness for its interests' in tenacity for its honor, in unceasing labor for its advancement. No neophyte or tyro is he in its affairs; he presided at its birth, nursed it through infancy and childhood, was the guide and counsellor of its manhood, and now in its ripe maturity adds spirit to its energies, watches its progress, faithfully guards its good name. and is the laborious chronicler and promulgator of its intelligence. Too full of the meekness of wisdom to be elated by praise, too worthy of praise to be defiled by flattery, and among all the living standing foremost in the constancy and duration of his devotion, I could almost ask you to allow me, by virtue of the authority in which I am clothed, to bid him stand, as sovereigns bid their heroes kneel, and dub him with the ensign and the title "*Noblest Roman of us all.*"

The main part of the address is devoted to the complex and difficult subject of the relations of the medical profession to tribunals of law, or, as Dr. Campbell briefly summarizes it, "The Doctor in the Courts"; and it must be acknowledged that he handles it with no little skill and ability. Few will gainsay the truth of his statement that, at the present time, and in the eyes of most communities, the plane to which the medical deponent and expert has at last gravitated is but little above that of the ordinary, if not the partisan, witness. Having dwelt briefly upon this point, he goes on to treat of the three principal positions or attitudes in which, as professional men, we most frequently stand related to the tribunals of law, viz.: first, as the medical witness; secondly, as the medical expert; and, thirdly, as a defendant in suits of malpractice; stating at the outset that in each one of these relations it could readily be shown that the medical man labors under disadvantages which do not, in the same degree, embarrass either the testimony or the defence of any other class of citizens.

In speaking of extorted testimony, he says: "Among many other burdens, under which, as a witness, the medical man at present labors, is the *hard lot* imposed by that principle of common law, still existing in most of our States, which declares that the necessary confidential revelations of patients to their medical advisers, however sacredly held by the physician, are not to be regarded, in the courts, as 'privileged communications.' * * * He must either betray the most sacred trust upon the assumed existence of which rest all the unquestioning revelations of all his patients, or he must pay the penalty—ordinarily fine or imprisonment—of 'contempt of court,' by boldly and honorably refusing to appear. I believe it to be, however, the natural impulse which soon becomes the habit, more or less, of every honorable physician to forget, as far as may be, all that occurs in his professional relations with his patient, except such points which relate directly to the nature and treatment of the case. These points only recur to his mind when brought again into professional relations with the patient."

He truly says that this principle of the common law, unrelieved by any statute in most of our States, conferring "privilege" on confidential communications of patients to their medical advisers, deeply concerns the interest of communities, and is a constant and degrading challenge to the honor of our profession, we all must deeply feel.

The conclusion of the address is devoted to a plea for the formation of a Section of Forensic Medicine in the Association. As recognized by this Association, he says the Department of Forensic Medicine should comprehend all the subjects as referred to in these several departments; but besides them, every question or occasion through which the medical man can be brought into relation with the tribunal of law; whether as a medical witness, as a medical expert, or as a medical defendant; or in time, when he shall have attained to his true dignity as *Amicus Curiæ*, or Adviser of the Court, his dictum equivalent to conclusive evidences, his scientific wisdom worthily rewarded as enlightenment indispensable in the upholding of justice; and his profound and conscientious opinion accepted with the same unquestioning confidence, as to its integrity, as that which is yielded to the judicial ermine, and the charges from the bench. He then recommended that a committee should be appointed to consider the expediency of organizing or rehabilitating a section in this department, and by a reference to the synopsis of the proceedings of the Association presented elsewhere it will be seen that such a committee was afterward duly appointed, with Dr. I. N. Quimby, of Jersey City, as its Chairman.

THE CODE OF ETHICS.—The report of the special committee of the Association appointed at the meeting of last year to consider certain suggestions made in the annual address of the president, Dr. Flint, as to the advisability of giving an authoritative exposition of some of the features in the work that have apparently been misunderstood is eminently satisfactory, and it is very gratifying to find that it was unanimously adopted by the Association at large. The committee, an admirable and truly representative one, consisted of Drs. N. S. Davis, A. Y. P. Garnett, H. F. Campbell, Austin Flint, and J. B. Hammond, and the preamble and resolutions which they presented after a most careful consideration of the subject will be found printed in full in the synopsis of the proceedings. These set forth explicitly that Clause I, Article IV, of the code is not to be interpreted as excluding from professional fellowship, on the ground of differences in doctrine or belief, those who in other respects are entitled to be members of the regular medical profession, and that there is no other article or clause of the code that interferes with the exercise of the most perfect liberty of individual opinion and practice, that there is no provision in the code in any way inconsistent with the broadest dictates of humanity, that the article which relates to consultations cannot be correctly interpreted as interdicting under any circumstances the rendering of professional services whenever there is a pressing or immediate need of them, and that, on the contrary, to promptly meet the emergencies occasioned by disease, or accident, and to give a helping hand to the distressed without unnecessary delay, is a duty fully enjoined on every member of the prosession, by both the letter and the spirit of the entire code; though no such emergencies or circumstances can make it proper to enter into professional consultation with those who have voluntarily disconnected themselves from the regular medical profession by indicating to the public a sectarian or exclusive system of practice, or by belonging to an association or party antagonistic to the general medical profession. This authoritative and official interpretation, rendered such by the unanimous endorsement of the members of the American Medical Association, would seem to "take the wind completely out of the sails" of the advocates of the new code. They have always claimed that it was because the National Code restricted the liberty of those subscribing to it in regard to these very points upon which it is now officially denied that any such restrictions exist, that the necessity for the formation of a new code was based; and now that it is definitely shown that such a construction of the intent of the code was an entire misapprehension, it is extremely difficult to perceive the *raison d' être*, from this time forth, on any plausible grounds, of the present code of ethics of the State of New York. May it not be hoped that ere long the members of the new code party here will once more be in full fellowship with the regular profession throughout the land?

A Move in the Right Direction.—The Sanitary Aid Society for the Tenth Ward of the city of New York, of which Gen. Alexander S. Webb is president, has now for some time been engaged in a very excellent work. Its members are gentlemen of such character and position as to stamp the organization as one entitled to the respect of the community, and those who contribute to its funds may feel assured that they will be judiciously expended in carrying out the laudable objects for which it was formed.

The recent investigations under the auspices of the State Tenement House Commission have shown more forcibly than has ever perhaps before been done, that certain districts of the city, where the poorest classes reside, are in every way in a most deplorable condition, the landlords, agents, and tenants alike, in many cases being guilty of culpable neglect. This society was organized to practically combat the evils of overcrowding and the general lack of sanitary precautions among the tenement population; and it has selected the Tenth Ward in which to begin its philanthropic work, because in this district there is found the most urgent need of sanitary reform. By thus localizing its efforts, it is enabled the more thoroughly to prosecute its special objects, which include the investigation of evasions and violations of existing sanitary laws, the prosecution of offending parties, the amelioration of the general condition of the residents, and the education of public opinion in regard to matters of hygiene. On the principle of a little leaven leavening the whole lump, it is believed that the good influence exerted by this society will gradually spread over a wider and wider area of the city occupied by the so-called "homes" of the poor.

It is true that there has already been some clashing between the agents of the society and the officials of the Board of Health, but at present it is satisfactory to observe that there is apparently a genuine *entente cordiale* between the two; and even were the health board much more efficient than it really is, there is no good reason why the two bodies should not heartily co-operate with each other in the good work in which they are both engaged. There is certainly abundant opportunity for all the efforts that are likely to be put forth for the improvement of the condition of the poor in this city for many years to come. In this connection, it may be stated that a bill has just been presented to the legislature, with the approval of both the city health authorities and the Sanitary Aid Society, which provides that the Board of Health may appoint twenty additional sanitary inspectors, who shall be sanitary engineers, and that those additional inspectors and at least fifteen officers and men detailed from the police force to the health board shall be assigned exclusively to the work of inspection of and enforcing the laws and regulations relating to tenement and lodging houses in the tenement districts of the city. In commenting on the matter a member of the law committee of the Sanitary Aid Society recently said: "The present situation is very simple. We have asked the Board of Health to follow up with a reasonable degree of speed the steps which we have taken unofficially in the inspection of tenement houses. The Board, as is well known, said point blank that such action was impossible, as it had not a sufficient number of inspectors for that purpose. Thereupon we endeavored to concert measures which would lead to a bridging over of all difficulties until some permanent and decided system of co-operation could be adopted. In this design, also, we were unsuccessful, owing to the self-declared inability of the Board to detail a sufficient number of men for inspection work for a short time. It was apparent that but one course was left us, and that was an appeal to the Legislature."

One very excellent feature of the work of the Society is the establishment of model cheap lodging-houses, designed especially, though not exclusively, for the reception of persons evicted from tenements.

VOLUNTEERS FOR THE RUSSIAN ARMY MEDICAL SERVICE.—It is reported that some twenty physicians of Michigan have offered their services as surgeons to the Russian Government, in the event of a war with Great Britain. It may be a good thing for the medical profession of Michigan to have its members reduced to this extent, but how any enlightened citizen of a free republic like these United States of America can, except with the Quixotic idea of posing as a missionary, engage in the service of a degrading despotism like that of Russia, passes comprehension. If anyone doubts the truly *paternal* character of the imperial goverment, let him read the following well-authenticated account of the treatment of a woman by the government officials in the recent thrilling work of Stepniak—"Russia Under the Tzars"—a book that causes the blood of the most phlegmatic to boil, and almost makes one feel that the nihilists are justifiable in their plots of assassination. Olga Lioubatovitch, while on her way to Siberia, was called before a local chief of police and ordered to change the dress she wore for the costume of a convict. She had been condemned, not to hard labor, but to transportation by administrative order, and therefore had a right to wear her own clothes. This she tried to make the officer understand.

"At her first words, however, he became furious, and repeated that she must not only change her dress, but do it there and then in the bureau, before everybody. To this monstrous request Olga Lioubatovitch answered by a plump refusal. Then at a sign from the *ispravnik*, his subordinates took hold of the prisoner and proceeded to undress her by force. A shameful struggle ensued. Several men set on this defenseless woman, beat her, pulled her hair, and tore off her clothes. So long as she kept her feet she defended herself as best she could, but the chief of the police, by a violent kick, felled her to the earth. What follows is best described in her own words: 'I fell into a kind of stupor. I remember confusedly how the heavy boot of the *ispravnik* struck my chest. Some one was pulling my hair, another was striking my face with his fists; the rest were tearing off my clothes, and at last, naked, crucified on the floor, in the presence of a crowd of men, I felt all the shame and horror of a woman violated.'"

At the end of the 19th century Russia, contributing nothing whatever to the world's progress, retains the barbarism of the middle ages, and remains the most arbitrary and infamous despotism among the so-called civilized nations of the earth. Freedom of speech and of the press are absolutely unknown, and the veneration of the Czar, causing all classes to yield a slavish submission to the most intolerable tyranny, has led to the adoption of means of oppression which have rendered the state of the Russian subject almost incredible. As has been well said, there never has been any justice in the land, but now even the pretense of it is abandoned. Of all crimes in Russia, the political are the most severely punished, and murderers—even parricides—and all the vilest criminals, not only escape execution, but enjoy much greater privileges during imprisonment than political offenders. In the famous fortress of Peter and Paul on the Neva, which Stepniak fitly calls the Russian Bastile, the treatment of the sick and insane is thus described by him: "There are horrors that defy description, that only the pen of a Dante could adequately portray. 'Oh, if you could see our sick!' exclaims the writer of the blood-written letter (written in the prisoner's own blood, which he obtained by biting his flesh, because he had no knife).

'A year ago they were young, healthy, and robust. Now they are bowed and decrepit old men, hardly able to walk. Several of them cannot rise from their beds. Covered with vermin, and eaten up with scurvy, they emit an odor like that of a corpse.' 'But is there no doctor?' it may be asked; and 'What is he doing all this time?' Yes, there is a doctor; there are even two doctors. One, however, is past fourscore and past work. He comes to the fortress only occasionally. The other is young, and probably kind enough in intention but not very resolute in character, and standing in great awe of the officers of the jail. When he visits his patients he is invariably accompanied by a brace of gendarmes, lest he should surreptitiously convey letters to prisoners. He enters a cell with a troubled countenance, as if he were afraid of something; never goes further than the threshold, much less approaches the sick man's bed or makes any examination of him, feels his pulse or looks at his tongue. After asking a few questions he delivers his verdict, which is almost always couched in the same words; 'For your illness there is no cure.' 'No mercy is shown even to the mad,' says another of the letters, 'and you may imagine how many such there are in our Golgotha. They are not sent to any asylum, but shut up in their cells and kept in order with whip and scourge. Often you hear down below you, or at some little distance, the sound of heartrending shrieks, cries, and groans. It is some wretched lunatic who is being flogged into obedience.'"

THE NECESSITY OF CAUTION IN THE USE OF THE METRIC SYSTEM IN WRITING PRESCRIPTIONS is shown in a fatal case of poisoning by atropia in Brooklyn last month. A physician ordered 1.5 milligrammes of atropia in 30 grammes of water, with the direction "as directed;" but the druggist, who, it is said, supposed that the medicine was to be used externally, mistook the 1.5 milligrammes for 150 milligrames, or, according to another account, for 1.5 grammes. At all events, the quantity of atropia was ample to destroy life, and the patient died after taking two teaspoonfuls of the solution. It does not appear, however, that he was ordered by the physician to take it internally.

A SAMPLE OF THE MANAGEMENT OF PUBLIC INSANE ASYLUMS.—On the 3d of May an inmate of the insane department of the county jail at Dubuque, Iowa, while laboring under a fit of mania, divested himself of all clothing, and became fatally burned by deliberately pressing his arms, breast, and abdomen against a hot stove. How considerate to have hot stoves so placed that poor lunatics can thus warm themselves so thoroughly at them!

THE JUNE NUMBER.—Among the original articles in the June number will be a historical paper of great interest and profusely illustrated, on the treatment of vesico-vaginal fistulæ, by Dr. Nathan Bozeman, and the paper on kidney colic, and renal calculi, by Dr. W. H. Taylor, which has been unavoidably omitted from the present number. The delay in the appearance of the May issue is due to a change in the printing establishment of the JOURNAL.

TO OUR CONTRIBUTORS AND EXCHANGES.—All communications to the editor, as well as all exchanges and books for review, should be addressed to 22 West 31st Street, New York. Business letters should be sent to the publishers' address, P. O. Box 1124.

# GAILLARD'S MEDICAL JOURNAL.

Vol. XL. NEW YORK, JUNE, 1885. No. 6.

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# ORIGINAL ARTICLES.

## No. I.—The Clamp Suture and the Range of its Applicability, Considered in relation to the Cure of the Injuries Incident to Parturition, with Statistics.* By Nathan Bozeman, M.D., New York.

It was my intention in the outset to include in this paper a brief sketch of the early labors of every surgeon in the United States who had in any way contributed to the common fund of our knowledge relating to the injuries incident to parturition. But when the material accessible for the purpose had been collected, it was found that, to do justice to all, more space would be required than the limits of an article to be read before this society would warrant. I therefore restricted myself in the present consideration of the subject to the clamp-suture, as perfected in June, 1849,* by J. Marion Sims, M.D., then of Montgomery, Alabama, and what was accomplished with it by him and other surgeons in the United States and England (the only two countries in which it was ever used), outside of the Woman's Hospital of the State of New York. The cases treated by those surgeons constitute the first series. The cases treated individually by Dr. Sims in the Woman's Hospital by the same method form the second series. The importance of the subject is sufficient to justify the time and labor which I have bestowed upon it, and the statistics collected cannot fail to prove of more than ordinary interest to the profession, in connection with the labors of Dr. Sims at this time, especially to the younger members of the society, who may not yet have a clear understanding of the peculiar difficulties that surrounded the treatment of the lesions in question only thirty years ago. As one of the oldest, if not the oldest operator now living in this country, I have to regret, as every one at all interested in the subject must, that Dr. Sims never published the statistics upon which rest his claims to priority of successful treatment of vesico-vaginal fistule. I always hoped that he would publish these statistics, knowing that they would place in a much clearer light the precise nature of the obstacles that he had to contend against in his early labors with the clamp-suture, and would at the same time prove interesting and profitable to the profession at large. Indeed, so thoroughly was I impressed with the importance of the subject, from all I knew about it from personal observation, and examination of the records of the Woman's Hospital, that, notwithstanding the differences of opinion between Dr. Sims and myself, as to certain claims of originality in the operation, which had existed for nearly a quarter of a century, I addressed him a letter in Paris urging the importance of his publishing these statistics, and promising him full co-operation in all that I could do in the way of assisting him. This letter, a copy of which is still in my possession, was sent to him through a friend in Paris, March 19, 1879; but the inference is that he did not regard the matter of much importance, as the communication remained unanswered.

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*Presented at the Annual Meeting of the American Gynæcological Society held at Chicago, September, 1884.

My reasons for addressing him upon the subject were fourfold: First, because we had been associated as partners years before, and had during that time treated jointly several important cases of vesico-vaginal fistule with the clamp-suture, the complete details of which were in my possession; second, because the method of operating was peculiarly his own, and he had only the year before our association in practice published his account of it,† in which he made important claims of originality and success; third, because the method proved afterwards defective in his own hands, especially in regard to urethro-vesico-vaginal and vesico-utero-vaginal fistules, which constitute more than one-third of all the fistules met with in practice; and, fourth, because I had been one of his most strenuous advocates of the method, up to the time, 1855, when I adopted the *new principles of gradual preparatory treatment and the button-suture.* Besides, having been charged by Dr. Sims with unfair criticisms upon his clamp-suture, I wished to modify these criticisms if he still thought they were, in any essential particular, unjust to him or to his claims.*

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* *American Journal of the Medical Sciences*, January, 1852.

† *Loc. cit.*

* As it is not generally known by the profession precisely what relation existed between Dr. Sims and myself at the period above referred to, and as great injustice has been done me by authors, both in this country and in Europe, growing out of the supposition that the relation was that of preceptor and student, which had been wantonly abused, with total disregard of honorable obligations and professional rights, it is proper to state in this connection the facts as they actually existed, since they form a part of the history of the subject under consideration, especially with regard to his stand-point just after he had achieved his first complete success with his clamp-suture. I had previously been a private pupil and assistant of the late Dr. S. D. Gross (then Professor of Surgery in the University of Louisville, Ky.) for nearly three years, and had acquired from that eminent teacher a practical familiarity with surgical maladies generally, and with surgical methods of treating them. It was under these circumstances that I settled, as a young practitioner, in the city of Montgomery, Alabama, my native State, in June, 1849 (the same month that he states he perfected his clamp-suture mode of operation), and was thrown in close relationship professionally with him. The result was that I was frequently called upon by him for assistance in his special operations for vesico-vaginal fistule, almost from our first acquaintance up to March, 1853, a period which included the date of his first paper (January, 1852).

When he lost his health, from the combined ill effects of overwork and residence in the South, and was seriously entertaining the thought of removing with his family to a northern climate, he communicated to me his intention of settling in the city of New York, and asked me to purchase his house and lot in Montgomery. He urged as a reason that it was only by the sale of this property, for which there was little or no demand, that he could hope to carry out the necessary arrangements to enable him to make this proposed change of residence. The result was that, on the ground of personal friendship, I became the purchaser of his property on the terms that he proposed, and considered by all acquainted with the transaction as most advantageous to him, financially, under the circumstances. In appreciation of this favor, he, unsolicited, associated himself with me in practice until the completion of his arrangements to leave the South for New York, which took place May 27, 1853, a little less than three months after this copartnership was formed.

In addition to these explanations, and in the same connection, I deem it important to state that Dr. Sims, soon after the dissolution of our copartnership, and when our differences with regard to certain claims of priority had sprung up, began to deny the originality of my labors in relation to my button-suture, and my modification of the lever-speculum, maintaining that this form of suture was no better than that of his clamp-suture, and at best could only be regarded as a slight modification of it, and of no practical value. As to my modification of his form of the lever speculum, he objected to this as worse than useless. This he continued to do in various publications, not necessary to mention here (notwithstanding the fact of his early adoption of my principle of gradual preparatory treatment, and my mode of adjusting interrupted silver sutures in the vagina), up to the time of his death, as shown by his autobiography, edited and published by his son within the last few months, entitled "The Story of My Life."

Here, on pages 316 and 364, are to be found derogatory references to me, together with my button-suture, and my modification of the lever-speculum, used in a case by me in the service of M. Robert, at the Hôtel Dieu, Paris, November 16, 1858, and exhibited to Mr. Isaac Baker Brown and other surgeons in Europe, on other similar occasions, which not only are unjust to me, and disparaging in the highest degree to my legitimate claims of originality, but reflect seriously upon my veracity and honor.

It is true Dr. Sims is dead, but his words and sayings live, and enter into the literature of the subject under consideration, and deserve to be regarded as valuable, only so far as they accord with principles and facts which are open to discussion by all. These will be considered by me hereafter in a separate paper.

It is not my wish or intention in this communication to take notice of any disparaging reflections whatever, relating to my labors, by Dr. Sims, but simply to lay before the profession all the facts in detail appertaining to our respective claims of originality and priority, by which alone personal as well as real scientific differences can be estimated and weighed.

That there were real differences between Dr. Sims and myself as to originality in the treatment of vesico-vaginal fistule, no better proof can be adduced than the publication of the statistics of the cases treated by our respective modes of operating, and the fact that he abandoned in the Woman's Hospital his original procedure,* only two or three weeks after the publication of my procedure.† The important questions, therefore, presented for consideration are two: First, which of the two procedures, one with the *clamp-suture*, perfected by him June, 1849, *without gradual preparatory treatment*, and one with *gradual preparatory treatment and the button-suture*, perfected by me May 12, 1855, was best suited to the treatment of all classes of injuries incident to parturition? And, second, what was the range of applicability of each procedure, from the beginning of its adoption, as measured by this standard of success? The peculiarities of the clamp-suture, first described by Dr. Sims, together with the principles upon which this form of suture was based, will now be presented, with the view of showing the range of its applicability, and the degree of success which attended its employment in actual practice.

Dr. Sims claimed for his procedure originality in these three particulars‡ (quoting from his first publication on the subject:) "1. For the discovery of a method by which the vagina can be thoroughly explored, and the operation easily performed. 2. For the introduction of a new suture apparatus, which lies imbedded in the tissues for an indefinite period, without danger of cutting its way out, as do silk ligatures. 3. For the invention of a self-retaining catheter, which can be worn with the greatest comfort by the patient during the whole process of treatment. *Of the Position of the Patient for the Operation.*—With the exception of Velpeau and Chelius, all other operators, even Jobert, recommend that the patient be placed on the back, as in the operation of stone." Dr. Sims *adopted* the teachings of the first two surgeons as to the advantages of the anterior positions, and selected as preferable for his purpose the *knee-elbow position*. His mode of exposing the fistule in this position was with what he then called "the lever-speculum," an instrument which had *long* been in use in Europe for the same purposes, but in which he made several important modifications and improvements. In Dr. Sims's first employment of this position of the patient, and of this form of speculum, there is no doubt that his estimate of their value related almost exclusively to examinations of the vagina and uterus in their normal state. This is shown in the following quotations: "An assistant on each side lays a hand in the fold between the gluteal muscles and the thigh, the ends of the fingers extending quite to the labia majora; then by simultaneously pulling the nates upward and outward, the os externum opens, the pelvic and abdominal viscera all gravitate toward the epigastric region, the atmosphere enters the vagina, and then, pressing with a weight of fourteen pounds to the square inch, soon stretches the canal out to its utmost limits, affording an easy view of the os tincæ, fistula, etc. To facilitate the exhibition of the parts, the assistant on the right side of the patient introduces into the vagina the *lever-speculum* represented in Fig. 1 [copied], and then, by lifting the perineum, stretching the sphincter, and raising up the recto-vaginal septum, it is as easy to view the whole vaginal canal as it is to examine the fauces, by turning a mouth widely open up to a strong light. This method of exhibiting the parts is not only useful in these cases, but in all affections of the os and cervix uteri requiring ocular inspection. "The most painful organic diseases, such as corroding ulcer, carcinoma, etc., may be thus exposed without inflicting the least pain, while any local treatment may be instituted without danger of injuring the healthy structures. *By this method also a proper estimate, anatomically, can be had of the shape and capacity of the vagina; for when there is no organic change, no contraction, and no rigidity of it from sloughs, ulcers, and cicatrices, and when the uterus is movable, this canal immediately swells out to an enormous extent, thus showing its great expansibility.*"

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*Register of the Woman's Hospital of the State of New York from 1855 to 1862.

†*Louisville Review.* May, 1856.

‡*American Journal of the Medical Sciences*, January, 1852.

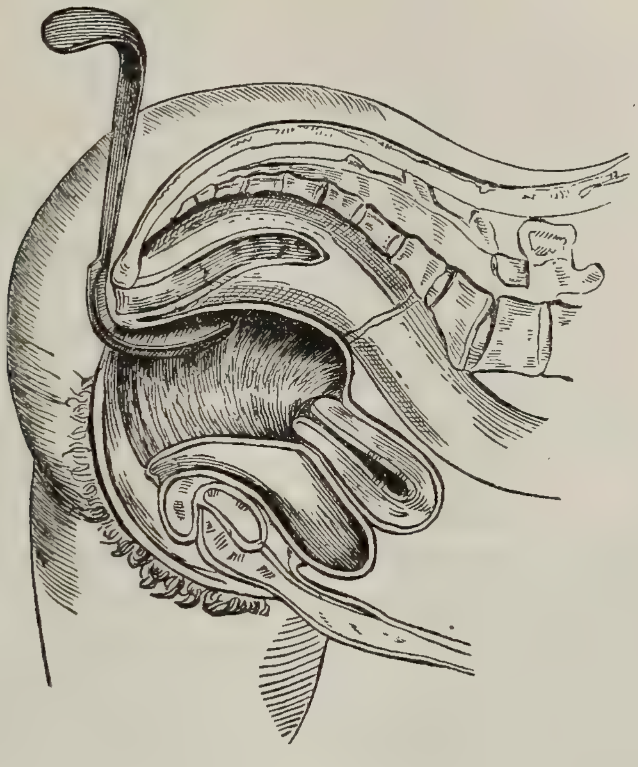
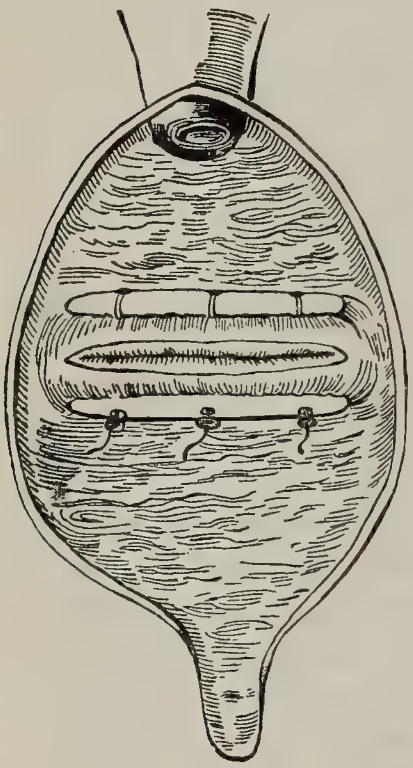


Fig. 1.

With regard to the suture apparatus perfected by Dr. Sims, as before stated, he says: "The one that I use for closing vesico-vaginal fistulæ I have termed the clamp-suture, from its peculiar method of action. Thus, if the profession allow me to introduce a new suture by its most appropriate name, we shall then have in general use sutures named, first, according to their relation, the interrupted and continued; second, according to the method of securing them, the quilled and twisted; and, third, according to its method of action, the clamp-suture. As all sutures are but modifications one of another, so is the clamp a modification of the quilled."

* * * * * * *

[Fig. 2, copied, illustrates the apparatus applied to a vesico-vaginal fistule occupying the most favorable position for its use in the vesico-vaginal septum.] "This suture is far preferable to anything before suggested for the purpose. Its introduction dates from June, 1849, since which time I have had comparatively little trouble in the treatment of the great majority of cases of vesico-vaginal fistula. Properly applied, *this suture never ulcerates out*, having always to be removed by means of scissors, hooks, and forceps. It may be allowed to remain intact for six, eight, or ten days, or even longer. If removed too soon, the delicate cicatrix may gradually yield to the traction of the ascending uterus, or to the force exerted by the bladder in expelling its contents, and reproduce a small fistulous orifice, to be closed by a subsequent and more cautious operation. I have seen the new cicatrix give way from another cause, and perhaps it is the chief one. *The clamps, burrowing in the vaginal surface, leave a deep sulcus, or fissure, on each side of the new citatrix, which, when they are removed too soon, fill up by granulation. It is a law of all granulating wounds to contract as they heal, and this contraction on each side of the new cicatrix is often sufficient to pull it apart.* But if the clamps are allowed to remain till their sulci are covered with mucous membrane, then there is no danger of this accident, for these closures then gradually disappear, less by filling up with granulations than by an absorption of their elevated edges. "Accidents of this sort have happened repeatedly in my hands, from a too early removal of the suture apparatus. Great judgment, which experience alone can give, is necessary to determine the length of time that the sutures ought to remain intact, for no positive rules can be laid down that will answer invariably in every case.


Eig. 2.

"I have also seen serious mischief result from leaving the clamps too long imbedded in the parts. *Then burrowing and ulceration may extend entirely through the vagino-vesical structure, thereby substituting new fistulous openings for the original one.* This complication is by no means incurable, but only prolongs the treatment and postpones ultimate success. In two or three instances I have witnessed a still more serious accident from an undue pressure of the clamp, viz., *a strangulation of the inclosed fistulous edges, which unfortunately resulted in a sloughing of the tumefied parts, and a consequent enlarging of the opening.* In no instance, however, has this accident rendered the case hopeless, or even caused me to feel any concern either for the immediate safety of the patient, or for ultimate success in treatment." Next, with regard to the *modus operandi* of the self-retaining catheter proposed by Dr. Sims as an essential feature of his procedure. (See Fig. 3.) Of this he says: "*When well fitted to the case, it can be worn with much ease to the patient, and never turns, never slips out, it matters not whether she lies on the back or side.* It is perfectly self-retaining, being held in the bladder by an internal pressure against the symphysis pubis, and by external pressure on the outer end exerted by the labia overlapping it, and hiding it entirely from view." [Italics by the writer.]

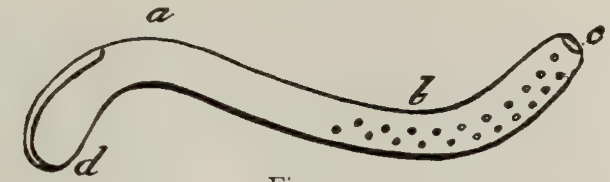


Fig. 3.

In conclusion, Dr. Sims speaks of his labors in connection with his new operation, and of the circumstances under which he perfected it, together with his experience in its use, in these words: "I have now completed what I have to say in a general way on the subject of the operation for vesico-vaginal fistula. It remains to detail individual cases, which will prove the curability of the disease, and also illustrate the varieties and complications to which it may be liable, The cases that occurred to me early, and which were given to me for the sake of experiment, will show the difficulties that had to be overcome, the many disappointments that had to be borne, and the ultimate success that crowned my efforts after the perfections of the mechanical contrivances, which, as it will be seen, was the work not of a day, and the result not of accident, but of long, laborious, and persevering application.

"But this communication has already reached to such an extent that I must postpone the relation of my cases to a future opportunity."

It is evident from all that Dr. Sims says in the extracts given above, from his first paper upon the subject of vesico-vaginal fistule, that he never entertained the idea of applying the clamp-suture to any other form of fistule than that of vesico-vaginal, involving the vesico-vaginal septum alone. Such a mechanism as that requiring the burrowing of the apparatus into the tissues, thereby becoming *concealed* from view, and having to be *searched* for in the tissues with a probe, when it did not occasion the more disastrous result of *strangulation and sloughing* of the borders of the fistule, can only be associated with the favoring conditions of a small fistule occupying a central position in the vesico-vaginal septum, and with those of a like size and position in the recto-vaginal septum. The pressure necessary to bring about this peculiar mechanism of the clamps described, could not fail in any form of fistule involving the junction of the trigone of the bladder and the urethra, and attended with loss of tissue—designated as a urethro-vesico-vaginal fistule—to produce the gravest complications. In those forms involving the junction of the *bas-fond* of the bladder and the cervix uteri with loss of tissue—known as vesico-utero-vaginal fistules—the apparatus could only be applied, and that with the greatest difficulty, in a few exceptionally simple cases.

Dr. Sims's omission, in the preparation of his paper, to describe and illustrate these last two forms of fistule, as he did the one of vesico-vaginal fistule, is conclusive either that he had had no experience in their treatment at that time, or that he recognized the fact that the clamp-suture was not applicable to the management of such lesions—the more probable explanation. It is unfortunate that he did not record his early experience touching these important points, as it would have then given the profession the practical data needed for a proper understanding of the subject. Some two years after this paper appeared, Dr. Sims published the details of four cases—three simple vesico-vaginal fistules and one vesico-utero-vaginal fistule; but this number was too small to be of any practical value in determining so important a question as the one whether his method, as described, was applicable to the treatment of the two exceptional classes of lesions referred to.

That Dr. Sims, in his early experience, had the opportunity of observing the lesion of urethro-vesico-vaginal fistule, as well as that of vesico-utero vaginal fistule, there can be no doubt. This opinion is based on the well-known fact that the proportion of the class of vesico-vaginal fistule, with which he was familiar, bears a more or less definite relation, not only to the class of vesico-utero-vaginal fistules (a case of which he reported, as stated), but to all other classes of fistules and injuries incident to parturition. Therefore, it is reasonable to infer that his field of observation and study, when he wrote his paper on the application of the clamp-suture to the treatment of the simple class of vesico-vaginal fistules, was sufficiently wide to include as well the proportional numbers, at least of the classes of urethro-vesico-vaginal and vesico-utero-vaginal fistules; and that his failure to point out their special treatment by his new mode of operating arose from a consciousness of the inapplicability of the method to these lesions, rather than from the want of opportunity for trial. I would state here that my conclusions, with regard to the inapplicability of the clamp-suture to the successful treatment of urethro-vesico-vaginal fistules, were based on personal observations of some of Dr. Sims's own patients, during the early period of his employment of the method. The same may be said to have been true of my conclusions as to the class of vesico-utero-vaginal fistules, though the inapplicability of the apparatus here existed in a less marked degree; there being a small proportion of these cases, unattended with loss of tissue in the *bas-fond* of the bladder and cervix uteri, that really could be cured with it by a judicious adaptation. I would also state, from my personal observation of Dr. Sims's general practice with the clamp-suture, that it was almost wholly inapplicable to that large proportion of cases belonging to all the classes of fistules and injuries, urinary, fecal, and perineal, complicated with plastic exudations about the vagina and uterus, with cicatricial contractions, bands, and bridles of the vagina, with immobility of the borders of the co-existing fistule or fistules, and with fixation of the uterus.

It is a remarkable fact that Dr. Sims, in his first paper, on the treatment of vesico-vaginal fistule, did not describe *cicatricial contractions* of the vagina as complications of the affection, thus showing that he either regarded them as insurmountable by any sort of treatment. or that he believed his clamp-suture was inapplicable under such circumstances. It is only through his followers that attention was first directed to this most important matter. Again, Dr. Sims was almost wholly mistaken in the estimate he placed on the value of his self-retaining catheter. Subsequent experience with it in the hands of other surgeons proved that it was troublesome to manage, caused cystitis, endangered the success of the method as a whole, proved inapplicable in a large proportion of cases, and, taken all in all, was far inferior to the male (English) elastic catheter, when any catheter at all was required. Therefore, from all that has been said up to this point in the discussion of the subject, it may be fairly stated that Dr. Sims's attention was almost exclusively directed to the treatment, with his clamp-suture, of that simple class of fistules *alone* known as vesico-vaginal, when the lesion was situated at or near the center of the vesico-vaginal septum, as his Fig. 2 illustrates on a preceding page. Here the adjustment of the apparatus was easy, and the clamps could always burrow smoothly and uniformly into the tissues, as insisted upon by him, provided there were no cicatricial contractions or inodular masses occupying the borders of the fistule. In transversely oval fistules thus favorably situated, with diameters not exceeding an inch or an inch and a quarter, it was possible to secure with it and his self-retaining catheter a fair degree of success. The proof of this limited adaptation of the clamp-suture is found not only in Dr. Sims's own individual practice, but in that of nearly all of his followers, including (in the chronological order of cases treated by them) the names of Sims and Bozeman, jointly, and Bozeman individually, then of Montgomery, Ala.; Baker Brown, Mussey, Thomas, Pope, Buck, Williams, Mettauer, Ash, Kollock, Wragg, and Finnell.

It is important to state here that all the cases reported, treated and not treated, by the above-named surgeons, belonged to the three classes of vesico-vaginal, urethro-vesico-vaginal, and vesico-utero-vaginal fistules, with the exception of a recto-vaginal fistule, which was operated upon and cured by Dr. R. D. Mussey, of Cincinnati, Ohio. In order now to point out particularly the peculiarities and relations of these three important lesions, and show the precise mechanism of the clamp-suture, with the limitations of its successful application in the several classes named, it will be necessary to refer to the two original illustrations, Figs. 4 and 5. The two figures both represent fistules at the center of the vesico-vaginal septum, the most common form and situation of the class of vesico-vaginal fistules, which are both shown to be closed by a transverse application of the clamp-suture similar to that illustrated by Dr. Sims (Fig. 2), but on a reduced scale. Below the seat of these two fistules thus closed with the clamp-suture are seen, at the junction of the trigone of the bladder with the urethra, two fistules unclosed, which belong to the class of urethro-vesico-vaginal fistules—one a longitudinal slit (Fig. 4), unattended with loss of tissue in either structure implicated, and the other (Fig. 5) a transversely oval opening, attended with loss of tissue in both structures. These are the simplest forms of this class of fistules. In the first, the relative positions of the clamps, in longitudinal outline, show the possibility of easily closing the fistule; but, in the second, the actual longitudinal positions of the clamps, with wires and perforated shot in readiness, show the impossibility of it, because the form of the lesion, and the slight elasticity of the structures below within the public arch, oppose the required mechanism of the clamps. Here, then, parallel approximation could not be effected, or their uniform burrowing into the tissues take place, without serious damage to the structures, on account of the underlying pubic bones. For the application to the latter form of fistules, therefore, the only other alternative would be to change the position of the two clamps to the sides of the fistule and place them in a transverse relationship, as shown by the lower clamp on the closed vesico-vaginal fistule, and the clamp in dotted outline standing across the urethra. By such a mechanism of the clamps, coaptation of the borders of the fistule would be possible; not, however, by equal approximation of both borders, for the reasons before stated, but by stretching the tissues of the superior border of the fistule, in which alone any elasticity resides. As to the other requisite of the mechanism of the clamps always insisted upon by Dr. Sims—the burrowing into the underlying tissues—it is easy to see what the effect of the lower one would be upon the urethra compressed against the pubic arch. It would simply cut in two and a urethro-vaginal fistule would be the result. With this explanation of the mechanism of the clamp-

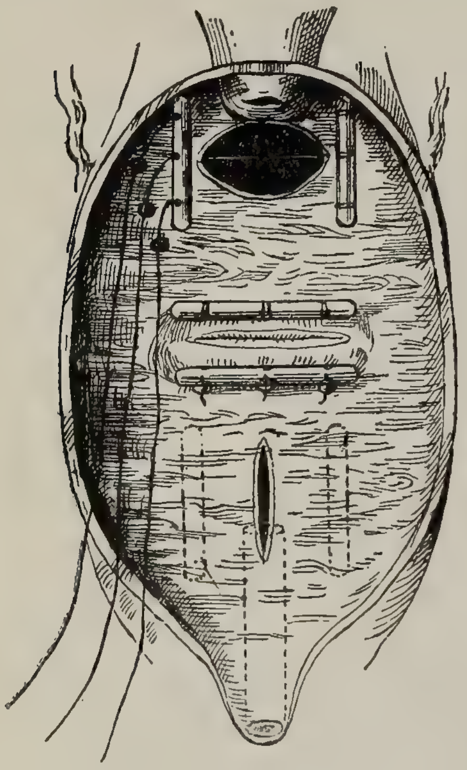


Fig. 4.

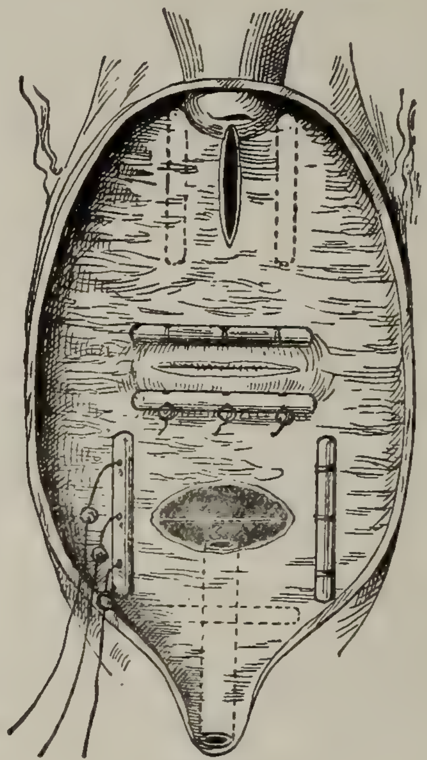


Fig. 5.

suture in a possible and impossible application of it, in the forms of the class of urethro-vesico-vaginal fistule illustrated, there will be no difficulty in imagining the increase of the defectiveness and dangers of the method, from the gradual augmentation of the size of the fistule, whether in one or more directions. Such a loss of tissue, it must not be forgotten, is liable to extend both longitudinally and transversely, sometimes involving the greater part or the whole of the urethra, on the one hand, and, on the other, the vesico-vaginal septum, together with a part or the whole of the infra-vaginal portion of the cervix uteri.

Let us next direct our attention in the two figures, beyond the seat of the two fistules closed, to the junction of the *bas-fond* of the bladder with the cervix uteri. Here are seen, also, two unclosed fistules which belong to the class of vesico-utero-vaginal fistules. One (Fig. 5) a longitudinal slit, unattended with loss of tissue in either structure implicated, and the other (Fig. 4.) a transversely oval opening, attended with loss of tissue only in the *bas-fond* of the bladder. These are likewise the simplest forms of this class of fistules. In the first, the relative positions of the clamps in longitudinal outline, with their upper ends resting against the sides of the anterior lip of the cervix uteri, show the possibility of easily closing the fistule, but in the second,the actual longitudinal positions of the clamps and sutures show the impossibility of it, because the form of the lesion, the slight transverse elasticity of the structures, and the position of the somewhat solid anterior lip of the cervix uteri between the upper ends of the clamps, all oppose the one essential element of the mechanism—to wit, their parallel approximation. The uniform burrowing of the clamps—the other requisite—however, is possible here, but not without serious danger to other important anatomical structures, notably the ureters. In this form of the lesion, therefore the only other alternative would be to introduce the same three sutures anteroposteriorly, making the middle one traverse the anterior lip of the cervix uteri in the mesian line, and the other two in the borders of the fistule proper on either side of the cervix. This being done, and the upper clamp being placed on the upper ends of the wires, across the cervix uteri, and the lower one on the lower ends of the wires in relation with the upper clamp on the closed fistule, the next thing called for would be the required adjustment of the apparatus, as illustrated by its application to the vesico-vaginal fistule below. What would be the mechanism of the apparatus, from such an application of it, in such a relationship of the parts? The obvious and injurious result would be the undue pressure of the clamp placed across the cervix uteri, supported at its middle, and mounted on a plane far above that of its fellow on the opposite side. The natural consequences of such an unphilosophical application of the apparatus would be to cause ulceration and the cutting across of the cervix uteri, followed by hemorrhage and possibly cellulitus and septic peritonitis, with permanent injury to the cervical canal, should the patient be so fortunate as to escape with her life. Still another grave consequence would be the almost certain burrowing of the lower clamp into the vesico-vaginal septum, and the opening of the bladder in its tract, simply or by the strangulation and sloughing of the included structures arising from stress of the ascending uterus, thus cutting short the prospect of permanent closure of the original fistule even by repetition of the procedure, should the patient be so fortunate as to escape with her life the disasters incident to a first trial. Next imagine the augmentation of the size of the fistule by a more extended implication of a part or the whole of the infra-vaginal portion of the cervix uteri, and a part or the whole of the vesico-vaginal septum down to the urethra, even to the extent of destroying a part of the canal—all different phases or grades of implications that are constantly met with in practice, as I have often personally seen—and think of extending the application of this form of suture by lengthening the clamps to suit the diversified grades of lesion indicated. For the human mind to conceive a greater absudity would seem clearly impossible.

How practical surgeons, in their experience with the clamp-suture, gradually approached the border-line of its efficiency and inefficiency, tried all sorts of expedients to accomplish cures which were impossible on account of the violation of natural laws involved in them, and invented all sorts of apologies for their disastrous failures, are interesting points of study. I propose, in my examination and analysis of the facts relating to the treatment of the several classes of lesions to which attention has been called, to present the views of each surgeon referred to, in his own words, so far as may be found practicable. This brings us now to an examination, according to classification, of the peculiarities of fistules treated with the clamp-suture in the United States and England, during the period of sixteen years extending from 1845 to December, 1861, when the last operation with it, of which there is any account, was performed, by Dr. T. C. Finnell, of New York. In this period are comprised all the fistules and injuries incident to parturition, and the results of their treatment with the clamp-suture, reported by Dr. Sims and the different surgeons before enumerated. The number of cases constituting the first series was thirty-eight, and they presented forty-three fistules and injuries belonging to six classes—twenty-four vesico-vaginal fistules, seven urethro-vesico-vaginal fistules, six vesico-utero-vaginal fistules, two urethro-vaginal fistules, two recto-vaginal fistules, and two lacerations of the perineum. The cases admitted into the Woman's Hospital of the State of New York, and treated individually by Dr. Sims with the clamp-suture, from May, 1855, to May, 1856, when he abandoned this form of suture, are comprised, as before stated, in the second series. The number amounted to thirty-seven, in which there were forty-two fistules and injuries belonging to five classes—seventeen vesico-vaginal fistules, seven urethro-vesico-vaginal fistules, eight vesico-utero-vaginal fistules, five recto-vaginal fistules, and five lacerations of the perineum. The number of cases in this second series, and the classification of the same in one year, are thus shown to be, by an extraordinary coincidence, almost precicely the same as those given in the first series, the treatment of which extended through a period of sixteen years; and, what is no less remarkable, the results of treatment in this second series vary but little from those of the first, as will hereafter be shown.

There is no evidence to be found, in connection with this second series of cases in the Woman's Hospital, that Dr. T. A. Emmet, the successor in 1862 of Dr. Sims, ever performed an operation with the clamp-suture, but his labors during the period named, beginning with the opening of the hospital, May 1, 1855, and showing his faithful record of the histories and peculiarities of the cases of this series, are not without great practical value in a statistical point of view. For this record, Dr. Emmet is certainly entitled to the highest credit from the profession, and I for my part heartily acknowledge this deep sense of obligation to him, since without it the individual efforts of Dr. Sims in this institution at that period, supported as they were by the resources of the great State of New York, and encouraged by the sympathies and sacrifices of a few noble women, would have been entirely lost to science, whatever may now be thought of their philosophy or usefulness.

## FIRST SERIES.—CLASS OF VESICO-VAGINAL FISTULES.

CASES I–III.—*First Three Vesico-vaginal Fistules cured with the Clamp-Suture—Lesions situated at or near the center of the Vesico-vaginal Septum—No Complications present—Forty Operations performed, mostly experimental, before the Method was perfected, and the Cures completed.*

Anacha, Lucy, and Betsy, all colored, were the first three women treated by Dr. Sims, in Montgomery, Ala., from 1845 to June 1849, with his various modifications of the old quill-suture, and, finally, with his perfected clamp-suture. They were all completely cured eventually; the three having undergone from first to last no less than forty operations in all. From the best information that can be gathered from the various published sources extant, regarding the peculiarities of, these cases, I am led to conclude that the fistules in the outset were all of small size and favorably situated, at or about the center of the vesico-vaginal septum in vaginas otherwise normal. These three first cases are of peculiar historical interest, from the great number of operations they underwent, and the gratifying results that were finally realized. It is to be regretted that Dr. Sims never made a detailed report of them.

CASE IV.—*Vesico-vaginal Fistule—Lesion Small, situated near the Center of the Vesico-vaginal Septum—no Complications present—one Operation with the Clamp-Suture—Self-retaining Catheter caused Inflammation of Urethra, and had to be removed on the Fourth Day—Clamps removed on Ninth Day, and found burrowed into the Tissues, almost out of Sight—First Operation Successful.*

Ann McKee,* colored aged sixteen, came under Dr. Sims's care in the autumn of 1849, and presented a transversely oval fistule situated just below the center of the vesico-vaginal septum, as shown by Fig. 6, copied from his original illustration. Dr. Sims operated upon the case October 25, 1849, with his clamp-suture, using three points of silver wire, and, in the after-treatment, his self-retaining catheter.

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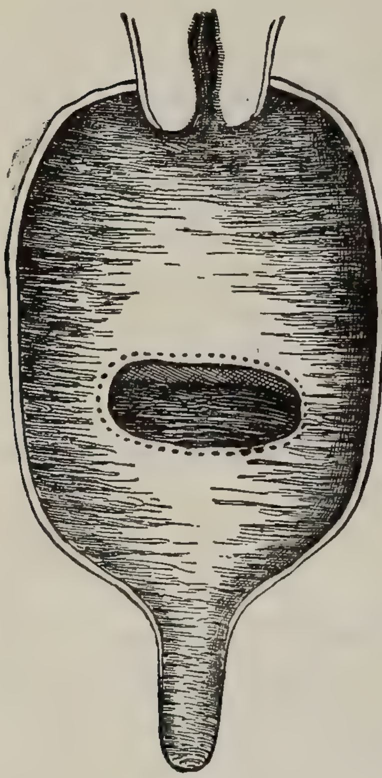
*See Case I., N. Y. Med. Gazette, vol. v, January, 1854.



(Fig. 6.)

He states that on the fourth day *the urethra became much inflamed and swollen, when the catheter had to be removed entirely* and the patient allowed to pass the urine naturally. An examination on the seventh day *showed the clamps to be completely hidden in the tissues from burrowing, only the projecting ends of the wires and perforated shot being visible* (italics by the writer). The apparatus was removed on the ninth day. Of the condition of the cicatrix on the eleventh day Dr. Sims says: "The sulci on each side of it made by the clamps were filled up by granulations, while the cicatrix, which two days ago was so compact as scarcely to be visible, is now considerably *widened, thinned, and depressed below the vaginal surface,* and evidently seems to be on the point of giving way" [Italics his]. He afterward remarks: "This was the first case I had cured by a single operation, and I felt great satisfaction at the result, particularly as it was obtained under such unfavorable circumstances."

CASE V.—*Vesico-vaginal Fistule—Situation same as in Preceding Case, but Size Larger—No Complications present—Patient very large, and could not bear the Knee Elbow Position—Operation with Clamp-Suture performed on the Left Side—Clamps removed on the Sixth Day, and found burrowed out of Sight in the Substance of the Bladder—Cicatrization of the Sulci thus produced nearly caused Reproduction of the Fistule—First Operation successful.*

Mrs. A. F., *aged forty, quite stout, and weighing nearly two hundred pounds, applied to Dr. Sims for treatment. He says: "Fistula was considerably larger than the one first described, but occupied precisely the same relative position with regard to other parts." He operated with the clamp-suture on November 12, 1849, when three points of suture were used. Owing to the inability of the patient to bear the *knee-elbow position,* Dr. Sims placed her on the *left side* for the operation, of which he thus speaks: "Placed on her left side, with the thighs well flexed on the abdomen, the nates forcibly pulled upward and backward, the lever-speculum was introduced and the parts brought into view, which was accomplished more easily than I anticipated, but did not show the fistula so well as when the proper position on the knees is resorted to. However I managed to get through with the different stages of the operation with tolerable ease. * * * On the sixth day the clamps were removed. They were *buried in the substance of the bladder, and entirely hidden from view, the leaden knots alone being visible.* The fistula seemed to be accurately and perfectly closed; the line of union being scarcely perceptible [italicized by the writer]. * * *

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*See Case II, *op. cit.*

It [the cicatrix] underwent precisely the same changes as noticed in the former case, only to a greater degree: viz., *a stretching, thinning, and depression,* which gradually disappeared, the cicatrix then becoming smooth and regular [italicized by him]. It follows, then, that three or four days is not long enough for the suture apparatus to remain, because the fistula has always been reproduced after its removal; and that seven or eight days is not sufficient, because there is great danger of the same accident. My large experience has demonstrated the fact that about twelve days is the proper length of time for the clamp-suture to remain in the tissues. It is evidently unsafe to remove it sooner, and it may remain till the fifteenth day with impunity, but a longer time is altogether unnecessary."

CASE VI—*Vesico-vaginal Fistule—Situation near Center of Vesico-vaginal Septum—Size very Small, and Direction through the Tissues Valvular—No Complication present—First Operations with Clamp-Suture successful.*

Mrs. H.* applied to Dr. Sims for treatment of a small fistule in the upper part of the trigone of the bladder, as seen in the accompanying illustration, Fig. 7, and thus described by him: "The fistulous opening was just above the neck of the bladder, a little to the right of the mesial line, and altogether favorable for a successful operation. It run diagonally through the walls of the bladder, thus forming a sort of sinuous canal of a valvular character." Dr. Sims operated upon the case February 2, 1853, using two points of suture with his clamps, and completed the cure at a single operation. Suture apparatus removed on the thirteenth day. (Illustration copied.)

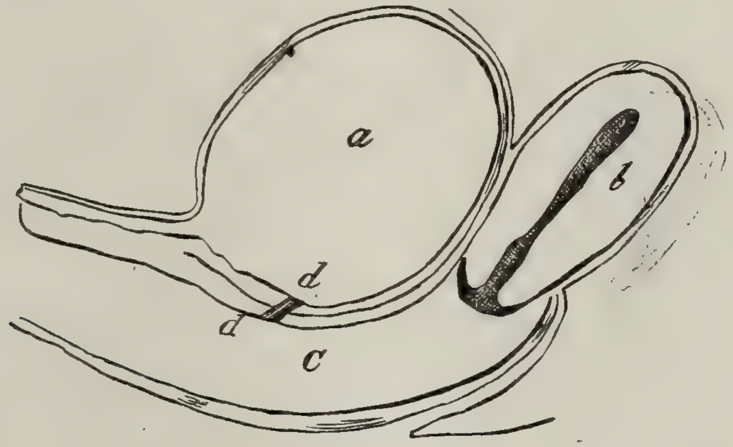

Fig 7.

CASE VII.—*Vesico-vaginal Fistule without Loss of Tissue, being the Result of Vesico-vaginal Lithotomy—Direction of Incision longitudinal—Situation in Trigone of Bladder—Calculus, Size of a Partridge's Egg—Easily siezed and removed—Vagina naturally Small, but otherwise Normal—Eight or ten Operations with the Clamp-Suture—Conversion of the Original*

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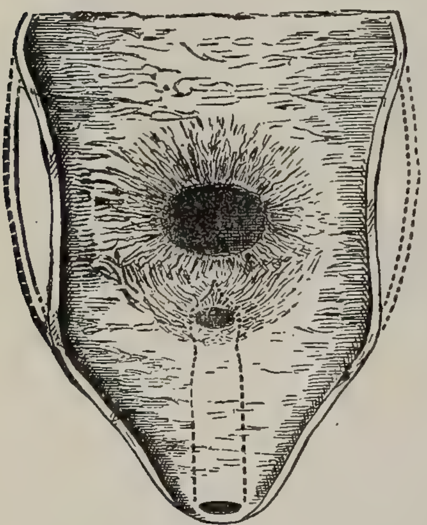
**New York Medical Times*, May, 1854, and *American Journal of the Medical Sciences*, vol. xxviii, p. 283, July, 1854.

*Incision into a Round Opening, the Size of the Index-Finger, and the Establishment of a Urethro-vesico-vaginal Fistule with Complete Obliteration at the Same Point of the Urethral Canal, and Extensive Cicatricial Surfaces around both Fistules, all Results of the repeated cutting away of the Tissues and sloughing out of the Suture Apparatus—Patient discharged incurable.*

Lavinia Boudurant, colored, aged thirteen, applied to Dr. Sims for treatment, on account of a calculus in the bladder, in the spring of 1850. The incision made for the removal of the stone was in the median line, and extended upward from a point near the junction of the urethra with the trigone of the bladder. It was about three-quarters of an inch in length, and consequently extended slightly into the *bas-fond* of the bladder. The calculus was siezed with forceps and removed through this opening. As soon as the bladder was cleansed of blood, Dr. Sims made a longitudinal application of his clamp-suture, the position of the clamps being the same as shown by dotted lines in the diagram, Fig. 4 illustrating a urethro-vesico-vaginal fistule unattended with loss of tissue. The result of this application of the clamps proved a total failure. I was present and assisted in the operation. During the next eighteen months or two years the patient underwent, without success, eight or ten similar operations, in many of which I also assisted. The final result was the conversion of the original straight incision in the trigone of the bladder into a transversely oval vesico-vaginal fistule, from the repeated paring away of the tissues and the ulcerating out of the suture apparatus. There was established also an additional complication from the same causes, a urethro-vesico-vaginal fistule about half an inch from the lower border of the existing vesico-vaginal one, and a complete obliteration of the urethral canal at the seat of the accidental opening. Over the obliterated portion of the urethra, and around the borders of each fistule, were to be seen extensive surfaces of a cicatricial or inodular tissue, resulting also from the repeated cutting out of the clamps, as shown by the wavy lines in the accompanying illustration (Fig. 8). The relation of the two fistules, as well as the obliterated point of the urethra between them, are also shown. No report of this case by Dr. Sims. Some six or seven years after this patient was discharged incurable by Dr. Sims, she applied to me for further treatment (January 18, 1858), when both of her fistules, together with the stricture of the urethra, as above described, were completely cured at two operations by gradual preparatory treatment, and my *button-suture,* as will be more fully described hereafter, in the consideration of the class of urethro-vesico-vaginal fistules.


(Fig. 8.)

CASE VIII.—*Vesico-vaginal Fistule—Situation of the Lesion below the*

*Center of the Vesico-vaginal Septum—Transversely Oval and of Medium Size—No Complications present—Ten or more Operations with the Clamp-Suture—Closure of the Fistule in the Middle, leaving two Angular Openings—Patient abandoned for a Time Uncured.*

Delia, colored, aged twenty-three, Dr. Sims's own servant. She began to receive treatment from Dr. Sims in the spring of 1850, and this was continued from that time up to March, 1853. Now becoming associated with Dr. Sims as partner, I had the opportunity of seeing the exact stage of advancement in the treatment of the case. Having also been present and assisted in some of the many operations previously performed by Dr. Sims, I had become thoroughly acquainted with the difficulties pertaining to the case. The fistule originally occupied a low and very accessible position in the vesico-vaginal septum, and extended transversely, but further to the right of the median line than to the left. It was in the outset oval in outline, and measured perhaps an inch and a quarter in its longest diameter. During the period the patient was under Dr. Sims's treatment, she underwent ten or more operations, according to her own account. Dr. Sims stated to me, regarding the previous history of his treatment, that by his first two or three operations he succeeded in closing the fistule in the middle and narrowing it down to two small angular openings, which had since defied all efforts to complete the cure. On or about May 20, 1853, Dr. Sims performed his last operation, which was a double one, and consisted in applying a pair of clamps to each remaining fistule. He left the after-treatment to me, this being only a few days before his own departure from Montgomery for New York to take up his residence therein. The result of the operation was a total failure, both pair of clamps cutting out. No report of the case was ever made by Dr. Sims. The woman remained in this condition until the autumn of 1855, when she applied to me for further treatment. Both fistules were completely closed, each at a single operation, by my button-suture. The case will be referred to again and illustrated in another connection.

CASE IX.—*Vesico-vaginal Fistule—Size Small, and Situation near the Cervix Uteri, and to the left of the Median Line—Cicatricial Contraction of the Left Wall of the Vagina with Distortion of the Canal opposite the same Point—Complications not treated—Three Operations with the Clamp-Suture for Closure of Fistule—All failed from the early cutting out of the Left Clamp—Dr. Sims's Lever-Speculum found to be too short to expose the Fistule—Important Modification of this Instrument by me—Patient first discharged uncured, and finally considered incurable, by the Clamp-Suture.*

Julia McDuffie, colored, aged twenty. She first came under observation early in March, 1853, and was treated jointly by Dr. Sims and myself, this being the first new case in our practice after we became associated as partners. The fistule was about the size of a No. 6 catheter, and was situated near the cervix uteri, about midway between the median line and left lateral wall of the vagina. Between it and the wall of the vagina, the parts showed the effects of direct injury, which had resulted in slight contraction of the canal at this point, together with a thickening and elevation of the corresponding border of the fistule to a plane above that of its fellow of the opposite side. Owing to the distortion of the vagina at this point, and the shortness of the gutter or valve or blade of the lever-speculum as improved by Dr. Sims (it being only about two and a half inches in length), great difficulty attended the effort of displaying the fistule in the knee-elbow position. The anterior wall of the vagina, being thus drawn toward the posterior, and restrained in its movements, could not drop to the usual position when the perinæum was elevated and air admitted into the organ, as always insisted upon by Dr. Sims as all-sufficient. Gravitation of the pelvic and abdominal viscera took place as usual, but the anterior wall of the vagina remained in its more or less restrained relationship with the posterior, thus preventing exposure of the fistule, as before stated. Nevertheless, on or about March 15, 1853, Dr. Sims performed his operation with the clamp-suture. I held the speculum, and of course saw the complication present, and realized fully the disadvantages of his short valve or blade for displaying the fistule. The nearness of the opening to the anterior lip of the cervix uteri precluded the possibility of making a transverse adjustment of the apparatus, even had the parts been in a normal state. Under such circumstances a longitudinal application became the only alternative, and this necessitated the placing of the left clamp upon the hardened and unyielding border of the fistule described, and of the right, upon the soft and elastic one. Two points of suture were used. Fig. 9 illustrates the closure of the fistule and the apparatus in position, together with the cicatricial contraction and distortion of the vagina on the left side. The left clamp, as shown, resting on a plane higher than its fellow of the opposite side, and instead of sinking into the tissues to reach an easy, even point of adjustment, it caused ulceration, and cut its way down, in the course of the after-treatment, to the required level, with consequent strangulation and sloughing of the included structures; thus resulting in an increase in the size of the original opening. Under the same difficulties with regard to the complications and exposure of the fistule, with Dr. Sims's short-bladed speculum I repeated the operation June 1, 1853, and with precisely the same unfortunate result.

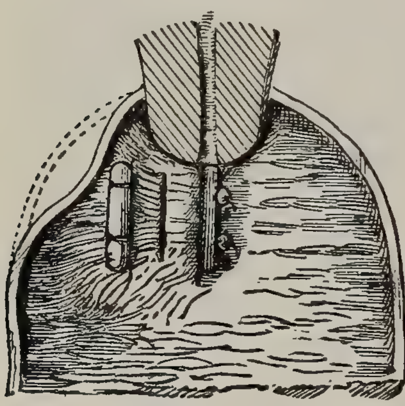


Fig. 9.

In both of these operations the patient showed great suffering, and in her struggles became quite exhausted at times. Finally, not being able to maintain the knee elbow position, she sank into that of the *knee-face*, in which the procedure was completed, as usual under such circumstances.

The general health of the patient suffered very much from these operations, and she was consequently sent home with no encouragement whatever to expect an ultimate cure. No report by Dr. Sims of this case, or his operation, was ever made. Nearly two years afterward, however, the patient returned to me for further treatment. I will speak of the subsequent operations and final result in another connection. Having observed the defectiveness of Dr. Sims's form of the lever-speculum, as employed in these two operations, it occurred to me that the instrument might be greatly improved for the treatment of all cases having the complications above described. In June, 1853, I submitted a plan of modification of the instrument to a Jeweler,* upon whom I was dependent at that time for all such impromptu work. The result was the embodiment of all my proposed alterations, which proved most satisfactory at that time. The accompanying cuts show the original forms of the two instruments—Fig 10, Sims's, and Fig. 11, Bozeman's. The objects of my modification of the form of Dr. Sims's speculum, without regard to aid from atmospheric pressure, and believed by me to be called for in this case, were threefold :

(1) To increase the length of the blade of the instrument from two and a half inches, as described by Dr. Sims, to about four inches, so as to make it extend nearly the whole length of the posterior wall of the vagina, thus making it pass into or beyond the point of cicatricial contraction. (2) To make the heel of the blade narrower, and the distal extremity wider, so as to insure greater elevation of the perineum, and consequently more forcible expansion of the cicatricially contracted portion of vagina, necessary for complete exposure of the co-existing fistule. (3.) To place the handle of the instrument at such an acute angle to the blade (75

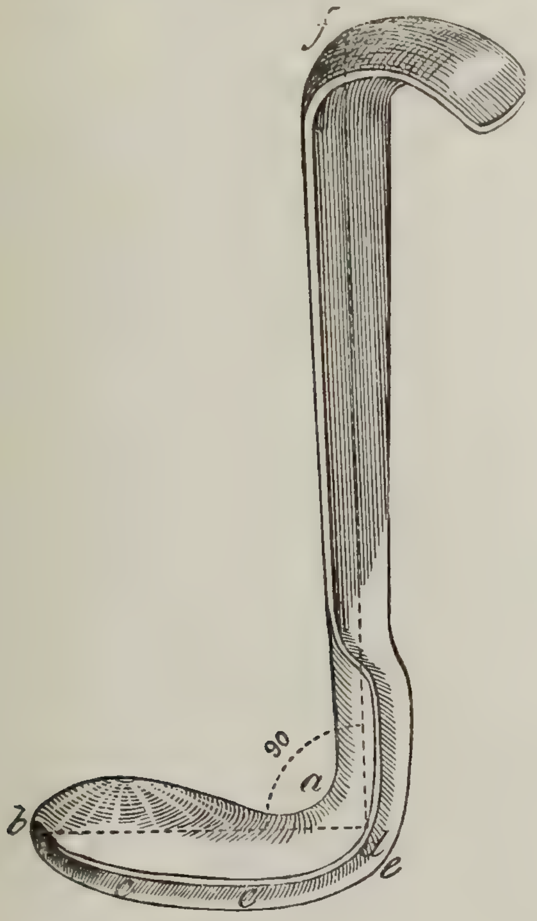


Fig. 10.

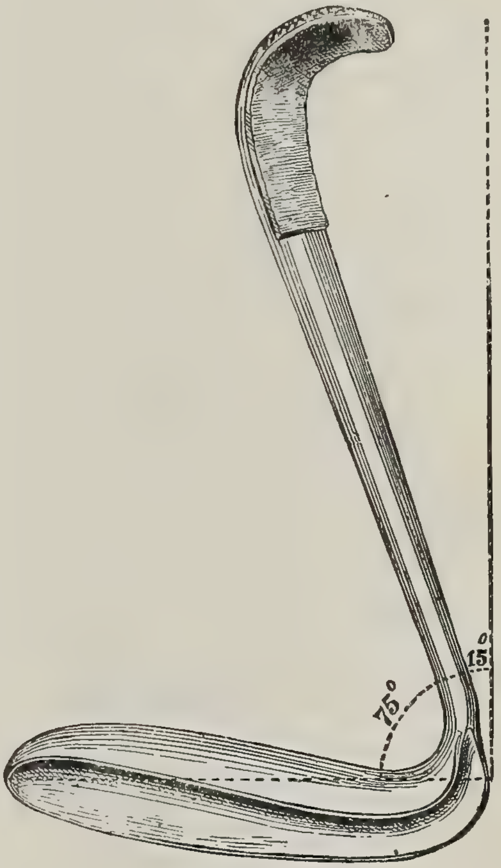


Fig. 11.

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* John Bates, of Montgomery, Ala.

degrees) that it could be easily held in the right hand of the assistant, with the forearm resting over the sacrum of the patient, thus giving the required adaptation of the blade to the entire rectal wall of the vagina without fatigue of the arm, as from the elevated and awkward angle of the elbow requisite in the use of Dr. Sims's right angular form of the instrument. That all of these alterations were philosophical, and the objects of them fully attained, I will only state the fact that my pattern of the instrument, as above shown, superseded in my hands entirely that of Dr. Sims, which was intended by him originally for the simple purpose of elevating the perineum and securing the admission of air into the vagina, thought to be sufficient for the distention of the organ.

CASE X.—*Vesico-vaginal Fistule—Situation supposed to have been favorable in the Vesico-vaginal Septum—Important Modification of the Clamp-Suture—First Operation with it successful.*

Dr. Mussey, in his report* of the first successful operation for recto-vaginal fistule, by an important modification of the clamp-suture, April 20, 1853, incidentally refers to an unreported case of vesico-vaginal fistule operated upon by a surgeon in Ohio, who had also modified the clamp-suture in a somewhat similar manner to that proposed by himself. He says: "Dr. Thomas, in the eastern part of Ohio, now of Pittsburgh, Pa., who treated a case of vesico-vaginal fistula with entire success, placed his stitches in the clamp-suture about the fifth of an inch apart. The wire which I employed in the recto-vaginal fistula was not far from twice the diameter of a horse-hair." This case of recto-vaginal fistule will be introduced in its appropriate place in the consideration of this class. Although the situation, size, and form of the fistule in Dr. Thomas's case were not stated by Dr. Mussey, the inference may be fairly drawn, from the success of the operation, that the lesion occupied the usual position at or near the center of the vesico-vaginal septum.

CASES XI–XIII.—*Three Vesico-vaginal Fistules—First one of Medium Size, and situated near the Center of the Vesico-vaginal Septum—No Complications present on the Anterior Wall of the Vagina, but upon the Posterior existed a few Cicatricial Bands—Complication not treated—First Operation with Clamp-Suture successful—Self-retaining Catheter caused Cystitis, and its Use had to be discontinued—Fistules in Second and Third Cases large, but supposed to have been favorably situated in the Vesico-vaginal Septum—Grave Cicatricial Contractions of the Vagina present—Complications not treated—Operated upon by heated Wire and Ordinary Suture, and by the Methods of Hayward, Jobert, and Sims, but all failed—Both cases discharged as incurable.*

Mary Porch, aged thirty, came under the care of Dr. Charles A Pope,† of St. Louis, in the autumn of 1853, presenting a fistula at the center of the vesico-vaginal septum, with a transverse diameter of an inch and a quarter. There were slight cicatricial contractions upon the posterior vaginal wall, and calcareous incrustations and excoriations of the external parts were also present. On December 3, Dr. Pope proceeded to operate with the clamp-suture, and was entirely successful at the first trial. He states that the *self-retaining catheter of Dr. Sims, in the after-treatment, caused cystitis, and its use had to be discontinued.* He concludes his report of the case with an allusion to two other cases, treated by the same method, but proving unsuccessful on account of the complication of cicatricial contractions of the vagina. As showing the gravity of such complications, and how they were regarded by Dr. Sims at this stage of his experience with the clamp-suture, the writer will quote Dr. Pope's own words. He says: "I have tried various modes of relief in these distressing cases of vesico-vaginal fistulæ, as the heated wire, the ordinary suture with freshened edges, Hayward's as well as Jobert's methods, and in three instances Sims's operation. Partial benefit occurred in almost every case. The two former instances, in which I failed by Sims's operation, *were not favorable cases, owing to their great size and the accompanying coarctations of the vagina. In describing one of these cases to Dr. Sims himself, whom I had the pleasure of meeting at the American Medical Association, held in Richmond, Va.* (1854), *he stated that he would not have undertaken an operation for its relief.* [Italics by the writer.] Cures of vesico-vaginal fistula have doubtlessly been effected by other means, but the success in my last case was so easily and completely attained that I must confess my decided preference for the operation adopted. Too much praise cannot be awarded Dr. Sims for his persevering and ingenious efforts in this department."

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* *American Journal of the Medical Sciences*, vol. xxvii, Oct., 1853.

† *St. Louis Medical and Surgical Journal*, vol. xii, p. 401, Aug., 1854.

CASE XIV.—*Vesico vaginal Fistule—Situation near the Center of the Septum, and Size Small—No Complications present—Lithotomy position, and Anesthesia used in the Operation—Jacobson's Lithotrite applied to expose the Fistule—Operation for Closure of the Same by an important Modification of the Clamp-Suture—Employment of Silver Wire and Flat Clamps instead of Round Ones, and of two interrupted Silver Wires, each secured independently with Perforated Shot—First Use of Interrupted Silver wire Sutures secured in this way—Anterior Clamp burrowed into the Tissues, leaving an ulcerated Groove—Fistule completely closed.*

Mary Harty, aged twenty-eight, came under the care of Dr. Gurdon Buck,* in the New York Hospital, July 4, 1854. The fistule was situated just below the center of the vesico-vaginal septum, and was of the size of the index-finger. Dr. Buck operated on this case on July 13, 1854, placing the patient in the *lithotomy position, and using an anesthetic.* Of the procedure adopted, which was an important modification of Dr. Sims's method, he says: "A. Jacobson's lithotrite answered a most useful purpose in bringing within reach the fistulous opening, and keeping the surrounding vesico-vaginal wall on the stretch, thus very much facilitating the subsequent steps of the operation. This instrument resembles in form an ordinary catheter with a short curve. The curve, when the instrument is opened, is converted into a pointed hook or noose. It was

**New York Medical Times*, vol. iv., October, 1854.

introduced closed per urethram into the bladder and then opened. By elevating the handle of the instrument toward the abdomen, the loop was depressed against the base of the bladder, forcing it downward into the vagina and forward toward the vulva. The fistule being thus brought within reach, its edges are pared away, so as to render the longest diameter of the opening transverse." The fistule having been thus exposed, and its edges pared, Dr. Buck introduced six silver sutures, and then secured them with "a narrow, flat strip of lead, called a clamp," and perforated shot. *Only the four middle wires were secured with the clamps and shot. The two ends were fastened independently by simply running down on each one of them a perforated shot, and compressing it.* The clamps and sutures were removed on the fourteenth day, and closure of the fistule found complete. The *anterior clamp had burrowed into the tissues some, leaving in its site an ulcerated groove.* (Italics by the writer.) The particulars in which Dr. Buck departed from Dr. Sims's procedure may be summed up as follows: 1. The patient was placed in the lithotomy position, instead of the knee-elbow. 2. An anesthetic was used. 3. Jacobson's lithotrite was used for displaying the fistule, instead of the lever speculum. 4. A greater number of sutures were used, and the two end ones were secured independently of the clamps, as interrupted sutures, by compressing on them perforated shot (a modification which Dr. Sims himself did not hesitate to adopt afterwards). 5. Narrow flat clamps were used, instead of small, round ones, preferred by Dr. Sims to facilitate their burrowing into the tissues.

CASE XV.—*Vesico-vaginal Fistule—Situation at or near the Center of the Septum, and of a Size to admit Two Fingers with longest Diameter Transverse—No Complications present—Two Operations with the Clamp Suture—In Second Operation the Apparatus found burrowed into the Tissues—Closure of Fistule successful.*

Mrs. R. came under the care of Dr. A. V. Williams,* of New York, in the autumn of 1854, presenting a fistule near the center of the vesico-vaginal septum, in a vagina otherwise normal. It was large enough to admit two fingers. Dr. Williams performed the operation, "as recommended by Dr. Sims," October 14, 1854. Everything progressed well until the fifth day, when the escape of urine per vaginam was discovered. Now, "on examination it was found *ulceration had taken place at one end of the clamps,* probably from their having been applied too firmly. It may here be remarked that *the proper application of the clamps is one of the nicest points of the operation: if applied too loosely urine will escape; if too tight, they will ulcerate. It is difficult to state the degree of pressure necessary; it is a matter for the exercise of judgment on the part of the operator.* It perhaps may do to suggest that, if the clean edges of the cut surfaces are brought into exact coaptation it will answer, as the swelling of the parts will then keep them well together. The condition of the clamps was always exactly as stated by Dr. Sims, and need not here be repeated. The clamps were removed on the eleventh day, when the fistule was found to be reduced to the size of

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***New York Medical Times,* vol. iv. p. 189, March, 1855.

one finger, the operation having practically failed. Dr. Williams performed a second operation, using the same form of suture, in December, 1854. He removed the apparatus this time on the fourteenth day, finding it "*lying seemingly enclosed in a new mucous surface;*" but the result was a complete closure of the fistule. (Italics by the writer.)

CASE XVI.—*Vesico-vaginal Fistule—Situation at or near the Center of the Septum, and Size half an inch in Diameter—No Complications present—One Operation with the Clamp-Suture—In the After-treatment, the Perforations in the Self-retaining Catheter became closed by Projections into them of the Mucous Coat of the Bladder—Closure of the Fistule successful.*

A colored woman, aged twenty-three, was placed under the care of Dr. W. C. Ashe,* of Demopolis, Ala., in the spring of 1855. No statement of the seat or form of the fistule is made, but it is said to have been half an inch in diameter. From the meager report of the details of the case, and the promptness with which it was cured with the clamp suture at a single operation, it is safe to say that the fistule occupied a favorable position for the burrowing of the clamps, at or near the center of the vesico-vaginal septum. The after-treatment was conducted by Dr. Ruffin, who had trouble with the self-retaining catheter, as may be inferred from the following statement: "He found that granulations would shoot rapidly into the foramina of the catheter so as to render its removal indispensable to the free discharge of urine." The operation was performed in March, 1855, and the patient discharged cured.

CASE XVII.—*Three Fistules, one Vesico-vaginal, one Urethro-vesico vaginal, and one Urethro-vaginal—Situation of Vesico-vaginal Fistule near the Center of the Septum—Directional Longitudinal, and of a Size to admit the the Point of the Index Finger—Cicatricial Contraction of the Vagina to the same estimated Size of the Fistule—Alkaline Urine and Extensive Excoriations of the Internal and External Genital Parts—First Successful Employment jointly of my Improved Lever Speculum, of my Supported Knee-Chest Position, and of my Gradual Preparatory Treatment—Very Close Relationship of the Vesico-vaginal and the Urethro-vesico-vaginal Fistule—Only possible to close one Opening at a Time with the Clamp Suture—Operated first upon the Former—Result, a Complete Failure from the sloughing out of the Apparatus—Causes of the Disaster, Hardness of the Tissues, and Poisonous Effects of the Urine upon the Denuded Edges of the Fistule, flowing into the Vagina through the Neighboring Fistule—Case now considered by me incurable unless Protection against the Evil Effects of the Urine could in some Way be Overcome—Invention of the Button Suture made for this Purpose, about a Month afterward.*

Matilda Stamper,† colored, aged twenty-one, came under my care in Mont-

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*See Case XVI. *New Orleans Medical and Surgical Journal*, vol. xii, July, 1885.

*New Orleans Medical and Surgical Journal*, January, March, and May, 1860.

~~gomery,~~ 698 Ala., February 9, 1855. Description at time of admission as follows: "Found the vagina very much contracted by indurated bands extending across it. One just below the cervix uteri occasioned such narrowing of the canal that the point of the index finger could scarcely be passed through it. On the posterior side of the organ the induration and contraction were greatest, giving rise to considerable shortening of the canal, and drawing in the labium pudendi of the right side. Communicating with the urethra, very near the meatus, there was a small opening; further back, just across the beginning or root of the urethra, was situated another, about three-quarters of an inch in length and, of course, communicating with the bladder. About half an inch above this last, and to the extreme right, was situated still another opening about the same size. These two last, one having its longest diameter transverse, and the other longitudinal, represented two sides of a square. In attempting now to pass a catheter through the urethra into the bladder, I found great difficulty, owing to distortion at its neck, caused by the anterior border of the fistule, situated thus, being drawn up to the pubic bones. (See Fig. 12, two-thirds size knee-chest position, introduced here to show the contraction and distortion of the vaginal tract and the situations of the fistules belonging to the three classes indicated. The dotted lines, seen running across the vesico-vaginal septum at C, point to the upper and lower extremities of the vesico-vaginal fistule situated to the right side, half an inch from the median section. B stands in the breach of the urethro-vesico-vaginal fistule, formed at the expense of both the trigone of the bladder and the root of the urethra, the end of the latter being obliterated and

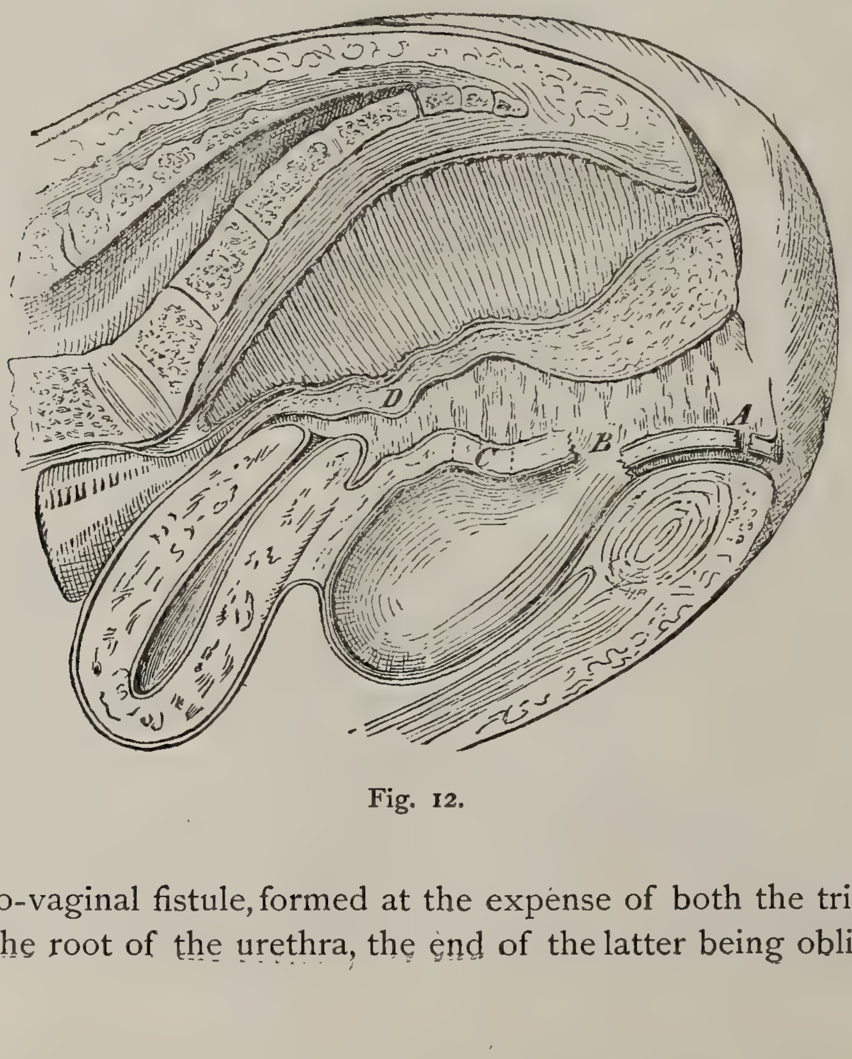

Fig. 12.

drawn out of line with the corresponding border of the fistule, and fixed behind the pubic bones. A indicates the break between the vagina and urethra just behind the meatus urinarius. D illustrates the point of greatest contraction and distortion of the vaginal tract, it not admitting there the point of the index finger.) Having now considered the case in all its bearings, I determined to make an application of Dr. Sims's 'clamp-suture,' this being the one I was at that time employing. Before proceeding to the operation, however, the question arose in my mind as to the possibility of closing both of the vesical openings at once by two sets of clamps, this appearing to me to be the preferable course. Upon a minute examination now of the parts, with reference to the practicability of such a procedure, I was convinced that it could not be done, owing to the narrowness of the intervening tissue, upon which both sets of clamps would have to rest. Thus applied, one of each set of clamps would necessarily cross the other. Seeing this difficulty, therefore, I determined upon the only other alternative, which was to close one opening at a time. The upper one [the vesico-vaginal fistule] (C) I selected for my first operation, thinking by this *to avoid, to some extent, the irritating effect of the urine passing through the lower opening* [B]. *As a preparatory measure now for this operation, I had to make deep incisions in the contracting bands of the vagina, and then dilate the whole organ by the use of tents.* [*Vulvo-vaginal dilatation.*] *This took up considerable time, and was the cause of much suffering to the patient, owing to the excessive irritability of the parts.*"

Fig. 13 illustrates the kind of tent or *intra-Vaginal* dilator which, after much experimentation and several failures, was finally adopted in the case, with the necessary incisions, as the proper mode of carrying out *gradual preparatory treatment.* It would be interesting here to point out the special advantages of this kind of sponge-dilator over that made of hard material (which could not be borne by this patient), but space does not permit. Suffice it to say, this bag of

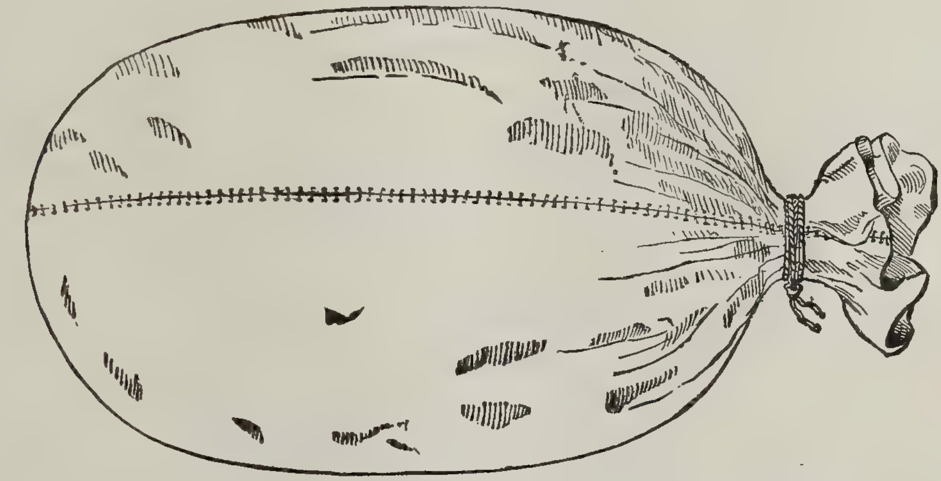

Fig. 13.

oil-silk, here represented two-thirds size, is filled with torn pieces of coarse sponge, every piece being compressed separately, so as to give the whole the required firmness for easy introduction. This form of dilator is also far better and more manageable than the ordinary compressed sponge-tents shielded in the same manner, because, in the use of it, the exact amount of pressure needed can always be determined beforehand—a most important precaution. This is the size used in the case, the diameter being about an inch and three-quarters (about forty-four millimetres). This was the limit of the dilatation reached in the case, after a little more than six weeks of persevering effort. But even with this limit of expansion of the vagina, there still remained a considerable degree of hardness and stiffness of the vaginal walls—a leathery condition, so to speak, with more or less persistent resiliency. My improved lever-speculum, used for displaying the cicatricial and contracted points in the vagina, was found to be very much restricted in its applicability. Indeed owing to the implication of the rectal wall, the incisions had to be made without the instrument. For making the required incisions, the employment of a properly adapted bivalve or dilating speculum for putting on the stretch cicatricially contracted bands would, no doubt, have contributed to a much higher degree of expansion of the vagina, and, consequently, a much more satisfactory display of all the fistules than were attainable in the way described, but there was no such instrument as the latter in use at that time. It is also important to mention here the fact that, during the stage of preparatory treatment, the patient bore badly the fatigue of the *knee-elbow* position, she having to change all the while from this to the very objectionable *knee-face* position, according to her fatigue or the severity of her sufferings. To obviate this unsteadiness of the patient, and insure greater safety and certainty in making the incisions, I resorted to the expedient, adopted by me in other cases for a year or so before, of placing her body in a horizontal position and supporting it there upon pillows, piled up one upon another, under the chest and head—the most comfortable and useful of all the anterior positions. By this plan, and a sufficient number of assistants to hold the patient upon the pillows, it was found quite possible to make her comfortable, and to secure the advantages of an anesthetic with safety. But, from the softness of the pillows, and their readiness to become disarranged attending the excitement of the anesthetic and the resistance of the patient, a bench of suitable height, surmounted by a firm cushion, was finally substituted for the former. This arrangement turned out to be a great improvement upon the pillows as a *chest and head support*, and afterward was also employed when an anesthetic was required. It finally became the sustaining part of what I described a few years later as my supporting and fixing apparatus for the *knee-chest position* without assistants. Attention will hereafter be directed specially to the superior advantages of this last improvement for overcoming the previously recognized necessity of *kolpokleisis*, and in fact for the performance of all operations upon open lesions in the anterior wall of the vagina, and to a very large extent upon those in the posterior wall as well.

Fig. 14 shows this patient in position, as she was held upon my cushioned bench, ready for the anesthetic, and the operation for closure of the fistule, with the clamp suture, after completing my gradual preparatory treatment.

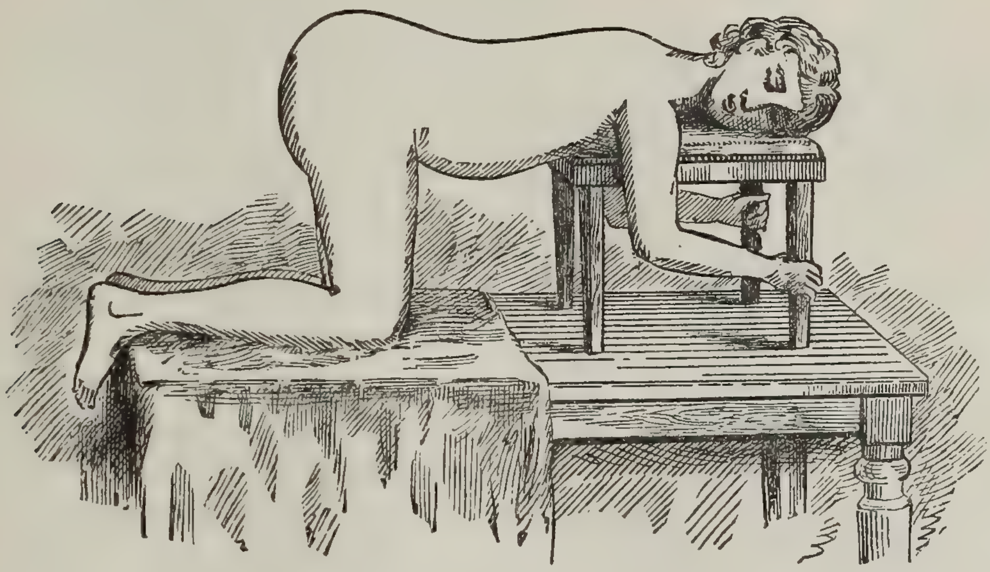

Fig. 14.

Present as assistants at this operation were Dr. W. C. Jackson, and two students of medicine, Mr. Hannon and Mr. Tarver, all of Montgomery, Ala. Here follows a description of the operation and result: "Operation, March 23, 1855.—Everything being as favorable as could be expected under the circumstances, the operation above indicated was performed. *Owing to the great induration and contraction of the parts, I encountered no little difficulty in going through with the different stages.* Three sutures were required to close the opening after its edges were thoroughly pared. These being introduced transversely, of course the clamps had to be applied [longitudinally], and thus secured. The edges of the opening came together well enough, but they were not accurately adapted to each other, owing to *a greater thickness of one than the other, and the consequent elevation of the corresponding clamp above its fellow.*

"With this condition of things the patient was put to bed, and a catheter (English elastic) introduced into the bladder to convey off as much of the urine as possible. Very little of it, however, passed through the instrument; it continued its old course through the vagina. The clamps were allowed to remain the usual length of time. When I came to remove them, I had no need of scissors. *The whole concern had sloughed out and lay loose in the fistulous opening, now greatly enlarged.*"

Fig. 15 shows the anterior wall of the vagina expanded to the limit indicated by the intra-vaginal dilator, and the different sizes of the three fistules, together with their relative positions in the different structures implicated. The pair of clamps applied to the fistule, described as located in the vesico-vaginal septum (the most eligible situation for their use than either of the other two lesions), are here shown detached entirely from the borders of the fistule, and incrusted with calcareous deposits from the urine, as found on the twelfth day after the operation. The shaded surfaces around the opening indicate the extent of the ulceration and cutting of the tissues by the apparatus. In addition to all this, there was a general elytritis superinduced by the increased acridity of the urine, arising from the operation and the cutting out of the suture apparatus.

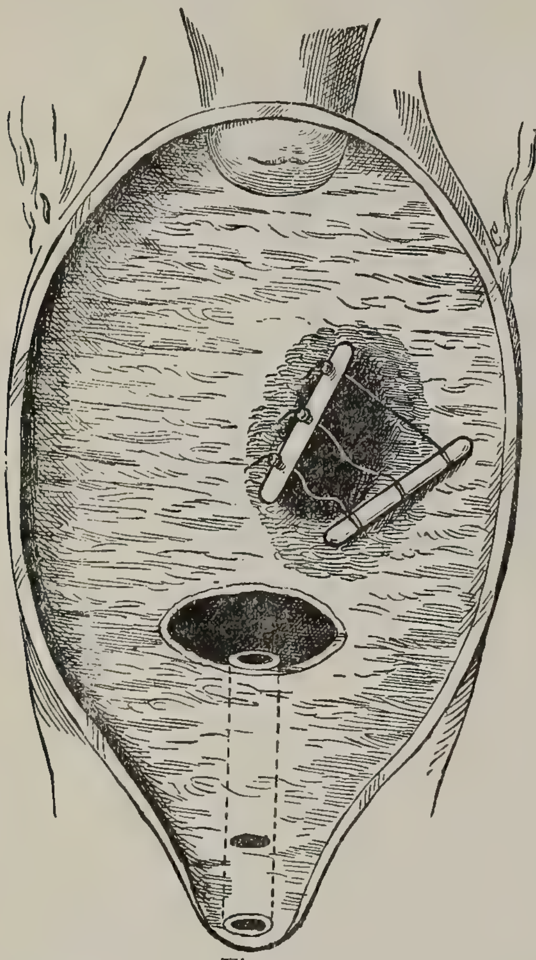

Fig. 15.

"The result of this operation thoroughly satisfied me that I should never be able to close all three of these fistules *successively*. The whole failure I attributed to the poisonous effect of the urine upon the denuded edges of the fistule, and the raw surfaces caused by the imbedding of the clamps. So well was I convinced of this fact, that I should have discharged the patient without ever making another trial, had not the idea fortunately occurred to me soon afterwards of protection to the approximated edges of one fistule from the irritating effect of the urine passing through the others. From this thought, scarcely need I say, the principle of the *button-suture*—a new application of the interrupted form of suture—originated, and was put into practice. Although the principle of protection was suggested in the combination above stated, by the peculiarity of this case, yet the first trial of it was not made here." The patient, after this operation, returned home to recuperate her health, and was not regularly treated again for about eighteen months. The case will be referred to again, and the final result stated, in the class of urethro-vesico-vaginal fistules, to be considered further on. Suffice it to say, it was not until after I had performed two other operations with the clamp-suture, in two different cases (the first successfully in a vesico-utero-vaginal fistule, and the second unsuccessfully in a vesico-vaginal fistule), that the principle of this new form of suture, which I accidentally discovered in the process of buttoning my vest, came to be applied. The first trial of it was made after this same second operation, it being a third failure with the clamp-suture in the case. Consequently, the introduction of the case, or rather the conclusion of its history, since it has already been related in part (Case IX of the series, Julia McDuffie), properly belongs here. To this will be added three other cases, two not belonging to the series (they never having been operated upon with the clamp-suture), and one, Case VIII. of the series, Delia, previously operated upon unsuccessfully by Dr. Sims.

The object I had in view in presenting at such length the foregoing history and treatment of Matilda Stamper's case was to show that, after adopting my modification of Dr. Sims's form of the lever-speculum, my supported knee-chest position, and, finally, my system of gradual preparatory treatment, all important principles with which to extend the usefulness of the clamp-suture, but which, in this case, utterly failed in their object, on account of the defectiveness of this form of suture, there was a sequence of incidents, from first to last, important to note, as showing the pressing necessity, at this juncture, of the invention of the *button interrupted suture.* By the adoption and successful application of this new form of suture in the cases of Julia McDuffie and Kitty Johnston, the two first cases in which it was employed, not only was the great value of the foregoing general principles demonstrated conclusively, but the philosophy of the suture itself was put to the severest test as to the range of its usefulness, which it would be difficult to overestimate, even at the present time. The sequence of the several improved stages of treatment thus far discussed, and the dates of their adoption, may be summed up as follows: 1. The modification of Dr. Sims's form of the lever-speculum, in June, 1853. 2. The utilization of the supported knee-chest position, in the spring of 1854. 3. The adoption and first successful application of the principle of gradual preparatory treatment for cicatricial contractions of the vagina, in February, 1855. 4. The invention of the button interrupted suture, embodying the new principle of shielding the denuded edges of the fistule from all septic influences, and of a special mode of adjusting all interrupted metallic sutures in the vagina without the intervention of the fingers, May 12, 1855. 5. The utilization of the uterus, by pulling it down and making it subservient, without incisions, to the reparation of all vaginal fistules attended with loss of tissue, August 23, 1855.

The following are extracts taken from the published reports of the four cases above referred to, presenting seven fistules in two classes, five vesico-vaginal, and one vesico-utero vaginal (two of them presenting grave complications), and all closed by the *button-suture procedure* at seven operations.

*A.—Vesico-vaginal Fistule—Small Size—Situation in the Septum near Cervix Uteri and Left Lateral Wall of Vagina—Cicatricial Hardness and Thickness of Left Border of Fistule—Distortion of Vaginal Tract at Same Point—Three Operations with Clamp-Suture unsuccessful—Used jointly in Third Operation with my Improved Lever-Speculum, and his Supported Knee-Chest Position for Anæsthesia—Good Exposure of Fistule—Result: Total Failure as in the Two Preceding Operations—Inapplicability of Clamp Suture to such an Abnormal State of the Structures proved—Some Two Weeks afterward Button Interrupted Suture invented—Applied now for the First Time under precisely the Same Circumstances as attended the Third Operation with Clamp-Suture—Result: Complete Cure without the slightest Irritation of the Structures involved—Invention of suture Adjuster and Demonstration of its Practical Utility at Same Time—This Instrument Indispensable for the successful Use of all Wire sutures in the Vagina without the Intervention of the Fingers—Applicability of the New procedure to such an Abnormal State of the Structures proved beyond Question.*

Julia McDuffie, colored, aged twenty-one, readmitted for treatment April 12, 1855. It will be recollected that this case first came under the joint care of Dr. Sims and myself for treatment in Montgomery, Ala., early in March, 1853. It was then stated that Dr. Sims operated upon the case with his clamp-suture (see Fig. 9), which proved a total failure from ulceration and the cutting out of the clamp on the left side, this border of the fistule being thickened and indurated; and that I repeated the same operation, under the same circumstances, about two months and a half later, June 1, 1853, with the same unfortunate result. It will be recollected that it was the cicatricial contraction of the vagina in the case which led me at that time to make a modification of Dr. Sims's form of the lever speculum with regard to the length and shape of the blade, and the angle formed by this with the handle of the instrument, as shown in Fig. 11. Below is the concluding part of the history of the case, and it will here be seen in my report that I avoided direct reference to Dr. Sims's failure with his clamp-suture: "The following spring (March 15, 1853,) she was *operated upon according to the method of Dr. Sims, but was not relieved.* She came under my charge a short time afterward, and, upon examination, I readily discovered a circular opening of about the size of a No. 6 catheter, occupying the vesico-vaginal septum near the neck of the uterus and a little to the left side. On the right side the tissues were in a normal condition, but on the left very much indurated. After due preparation of the system, I applied the clamp-suture in the usual way. On the thirteenth day I examined and found that the clamp on the left side had cut entirely out, and the aperature considerably enlarged. Shortly after this unsuccessful operation the patient's general health became very much impaired, and it was thought advisable to allow her to return home. I heard no more of the case until April 12, 1855, when she was again placed under my care, having, in the mean time, entirely regained her usual good health. I found, on making an examination, that the fistule was somewhat smaller than when I last saw her, but the induration of the left border still existed. Aside from this latter circumstance, I considered the case altogether favorable, and felt very confident that an operation would prove successful. Accordingly, on the 17th of April, I applied the clamp-suture again. The edges of the fistule came together beautifully, but, owing to the *indurated condition on the left side, the corresponding clamp could not be made to imbed itself, and consequently rested on a plane higher than the one on the opposite side.* Notwithstanding this rather unfavorable feature, I was very sanguine of success. On the thirteenth day I examined the parts, and, to my great mortification, saw that the left clamp had again cut out, and thus enlarged the opening. (See Fig. 16.) This was my last operation with the clamp-suture. After two (three in all) such signal failures with the only operation that I then considered worthy of confidence, I was much discouraged, and had serious thoughts of abandoning the case altogether; but it was only a week or two subsequently that the principle of the button-suture first suggested itself to me, and I immediately determined to subject the case to an experimental trial. All things being ready, on the 12th of May (1855) I put the new method in operation.

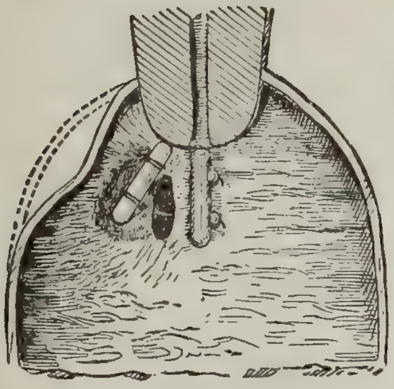

Fig. 16.

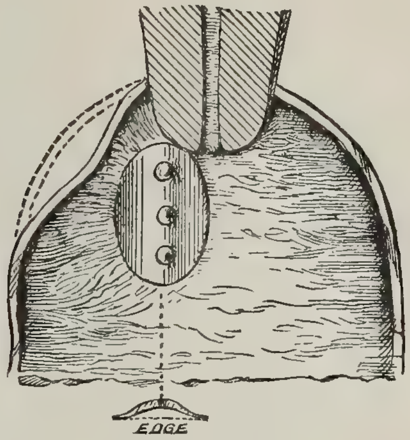

Fig. 17.

Everything seemed to progress favorably. On the thirteenth day I removed the apparatus, and, to my great delight, found the fistule completely closed, and not the slightest evidence of irritation except what might be naturally expected around each suture."

Fig. 17 shows the operation completed, and the adaptation of the apparatus to the parts, the general condition of the latter being precisely the same as in the previous three operations, with the increase added each time, of course, of the cicatricial hardness of the tissues, arising from the ulceration and cutting out of the clamps, which had to be placed on the thickened border of the fistule. In the construction of this button-suture, the silver wire and perforated shot used were, of course, borrowed from the now discarded clamp-suture method of Dr. Sims; but it is proper to state in this connection that Dr. Henry S. Levert,* of Mobile, Ala., was the first, certainly in this country, to point out the innoxiousness of silver wire, and its superiority on that account to ligatures made of organic substances. Dr. J. P. Mettauer, of Prince Edward, Va., three years later demonstrated the advantages of simple interrupted lead sutures, secured by twisting over those of silk for recto-vaginal fistules and laceration of the perineum. My form of suture was, properly speaking, a button interrupted suture, being, in principle of action, a combination and extension of the old principles of the interrupted and twisted sutures. The originality, therefore, was in the combination and extension of these two principles, just as the clamp-suture of Dr. Sims was a combination and extension of the old principles of the interrupted and quill sutures; his originality being the substitution of Levert's silver wire for silk, and of small, round perforated lead bars for the quills, and in the use of perforated shot to secure the whole.

As an essential feature of the radical change of principle and form of suture made at this juncture in the history of the subject, I deem it important to introduce, in connection with the same, the accompanying illustration of my suture adjuster (Fig. 18), as a means of quick coaptation of the denuded edges of the

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**American Journal of the Medical Sciences*, May, 1829.

fistule without the intervention of the fingers inside the vagina. This consisted in doubling or shouldering large-size silver sutures, one after another, and thus quickly drawing the denuded edges of the fistule in close and firm contact; the loops in the wire in all cases being sufficient to hold the parts together until the process was completed, and the line of closure could be examined, as shown by Fig. 19. When the latter was found unsatisfactory, from defective or ragged paring, it was easy to undo the loops and complete properly this important step of the operation, thus making it mathematically accurate. The coaptation of the denuded edges being now finished, and the line of union seen to be perfect, the next step was to hermetically seal it, by sliding down upon the doubled and shouldered wires the perforated button or shield over the structures and then firmly securing it. This was effected with perforated shot slid down upon the wires in a similar way, and compressed with a pair of strong forceps successively upon the top of the button, thus completing the procedure in two distinct stages. No such instrument for specially adjusting wire sutures had been used prior to this date. Surgeons* formerly had been in the habit of putting to-

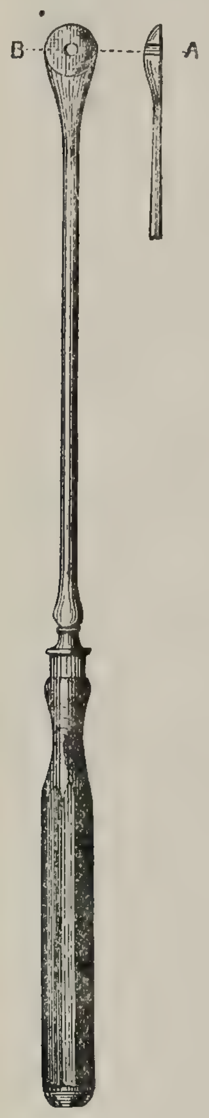

Fig. 18.

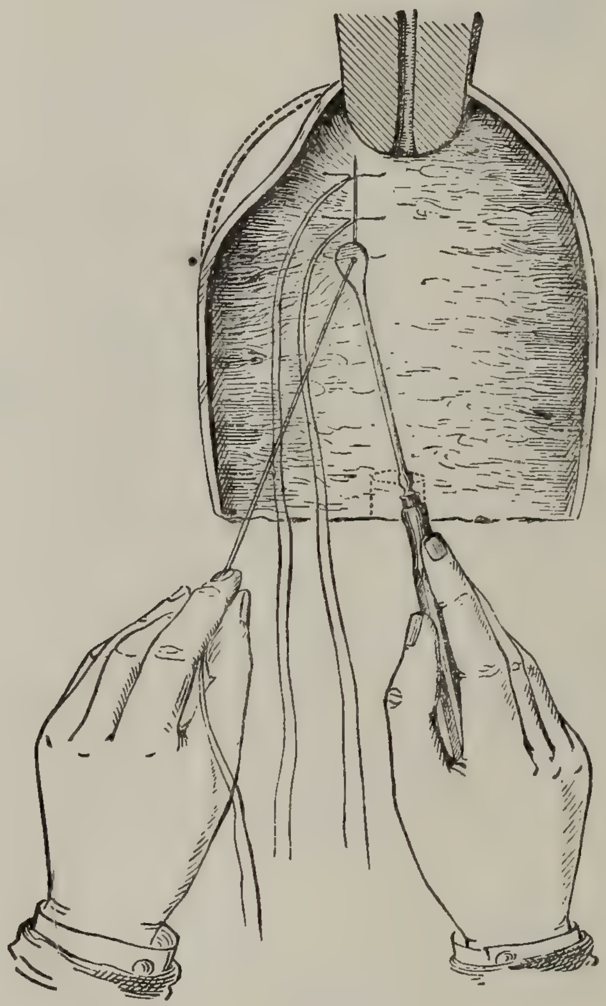

Fig. 19.

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* Mettauer, *loc. cit.*, 1832. Gosset, *Lancet*, November 21, 1834

gether the two ends of each wire outside the vagina, and then twisting them like a cord from right to left, or left to right; thus the two edges of the denuded fistule were slowly dragged into contact and loosely or firmly coaptated, as the chance experience of the operator might determine. In the operation with the clamp-suture,* such an instrument was not required, as both ends of each of the several wires had to be disposed of and secured separately. Whether, in the use of this suture adjuster, the two ends of the several wires to be first passed through the hole outside the vulva, and the instrument then be slid down upon them to the extent of forming a small, closed loop and coaptating the edges of the fistule, as preparatory to their fixation with the button and perforated shot; or whether the hole in it be slit out to its extremity and the two ends of the several wires be received into it inside the vagina, where the instrument is firmly held against the edges of the fistule, as preparatory to their fixation by twisting alone, as in the use of simple interrupted sutures—is a matter of no consequence; the principle is one and the same. The instrument may be called a *suture adjuster*, or, as variously modified, a "fulcrum," a "prop," a "support," or anything else; but the *originality and priority* of its use constitute a part of the invention and first employment of the button-suture, May 12, 1855.

The Woman's Hospital of the State of New York threw its doors open on May 1, 1855. My last operation with the clamp-suture took place thirteen days before, and my first with the procedure of the button-interrupted suture twelve days after that date. While all this was going on, Dr. Sims, the surgeon-in-chief of that institution; was just about beginning the second series of cases with his clamp-suture, to be hereafter presented. In that connection I shall show the extraordinary coincidence that *his* last operation with the clamp-suture took place in the Woman's Hospital, in the case of Emily Stebbins, on May 12, 1856, twelve days after the first account of my new procedure appeared in print.† I shall also show, in this connection, that Dr. Sims performed, in the same institution, his first operation with the simple-interrupted suture secured by twisting (as first practiced by Mettauer with lead sutures) in the case of Ellen Quidre, about six weeks later, June 23, 1856;‡ and that, in this new procedure of his, the modifications of my suture adjuster, Fig. 18, under the name of "fulcrum of support," and of my sponge-dilator, Fig. 13, under the designation of "glass plug," form distinguishing features without which even the most skilful operator at the present time would be almost as powerless as he was with his old clamp-suture in endeavoring to master the real difficulties appertaining to the treatment of the simple class of vesico-vaginal fistules.

*B.—Two Fistules, one Vesico-vaginal and one Vesico-utero-vaginal—Situation of Former below Center of Septum and of Latter in Bas-fond of Bladder, against Cervix Uteri—Between the two Openings, Cicatricial Contraction*

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*Sims, *American Journal of the Medical Sciences*, January, 1852.

†Case I, *Louisville Review*, May 1, 1856.

‡"Silver Sutures in Surgery," 1858.

*of Vaginal Tract down to the Size of a Surgeon's Probe—Urine exceedingly acrid and loaded with Triple Phosphates—Vaginitis of High Grade—Extensive Excoriations of the Labia Majora, Buttocks, and Thighs—All five of the Principles embodied in the Button-Suture Procedure beautifully illustrated—Closure of the Vesico-vaginal Fistule at One Operation; Denuded Edges of Fistule effectually shielded from all Extraneous Influences—Cicatricial Contraction of Vagina attacked and overcome—Anterior Lip of Cervix Uteri without Incisions made subservient to closure of the Vesico-utero-vaginal Fistule at One Operation—First Step toward superseding the Necessity of cutting loose the Cervix Uteri from the Bladder to avoid Traction upon the Sutures, as previously recommended by Jobert de Lamballe—Patient discharged cured.*

Kitty Johnston,* colored, aged eighteen, applied for treatment May 24, 1855, under the following circumstances: "Found the thighs, the buttocks, and the labia majora almost completely incrusted by calcareous matter, and so sensitive that the least effort to separate them caused excruciating pain. Before the vagina could be explored, this deposit had to be removed, and even then the suffering was considerable, owing to an extremely irritable condition of the organ, and a protrusion of the mucous coat of the bladder through the fistulous opening. When the speculum was introduced, *the posterior wall of the vagina could not be raised up with the usual facility. This I soon found resulted from a morbid attachment of its two walls. The adhesion extended obliquely across from the right side of the cervix uteri to the left side of the vagina, thus concealing from view the os uteri, and rendering an exploration of the entire canal impossible.* A fistulous opening [vesico-vaginal] three quarters of an inch in length occupied the vesico-vaginal septum, and extended from near the beginning of the urethra obliquely upward and to the left, terminating abruptly at the point of contraction. Here a careful examination revealed a small opening which allowed a probe to pass into the *cul-de-sac* above, and from thence into the bladder, showing clearly that another fistule [vesico-utero-vaginal] existed in this situation. [See. Fig. 20.] "Having thus ascertained the true condition of things, I became satisfied that two operations would be required. The fistule first described was accessible, and demanded my first attention, owing to its larger size and the very irritable state of the mucous coat of the bladder which protruded through it. I thought it advisable, however, before attempting any operation, to improve the patient's general health.

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"*June* 12.—[The patient being in the supported knee-chest position] I proceeded to apply the button-suture to the lower opening. Much difficulty was encountered in paring the edges, owing to the great resistance of the patient and the herniated condition of the mucous coat of the bladder. Four sutures were required; the button was seven-eighths of an inch in length, and about five-eighths in width. [See Fig. 21.] For two or three days after the operation there was considerable fever and pain in the hypogastric region, and I feared

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*Case II, *op. cit.*

something serious might result; but things soon took a favorable turn, and the case seemed to do well until about the seventh day. At this time a great discharge of urine occurred from the vagina, and my first impression was that the sutures had given way; but, upon examining the parts carefully, I discovered the whole of the difficulty to depend upon tympanitic distention of the bowels, attended at times with powerful peristaltic action. * * * Feeling a little uneasiness as to the result, notwithstanding the discovery of the source of the trouble, I determined on the ninth day to remove the apparatus. Upon the introduction of the speculum into the vagina, the parts presented a most unpromising appearance; the mucous membrane was of a deep-red color, and the button completely incrusted with earthy matter. I now had a firm presentiment that all was not right; but, when the sutures were clipped and the button raised, I found to my great satisfaction that union of the parts was perfect. In a few weeks I made preparation for the other operation by *breaking up the morbid adhesion between the two walls of the vagina, so as to expose the fistulous opening above. To prevent reunion of the parts, a bag made of oil-silk and stuffed with bits of sponge was introduced into the vagina. This was renewed daily, and injections of cold water used, by which means the upper extremity of the vagina was dilated in a few weeks to its normal size and the fistule well exposed.*

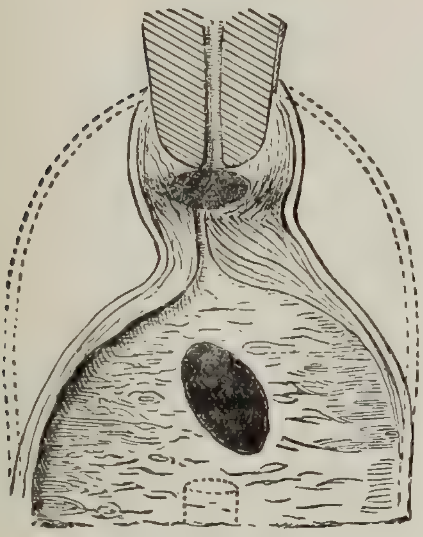

Fig. 20.

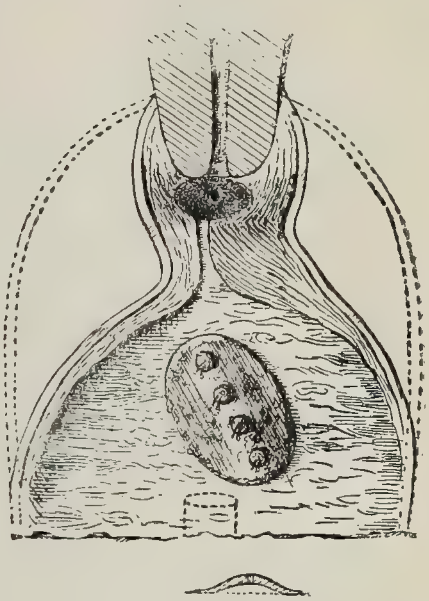

Fig. 21.

"*August* 23.—Everything appearing as favorable as could be expected, I proceeded to operate. Only three sutures were required; but, as in the former operation, I had much difficulty, owing to the resistance of the patient. Tympanites supervened again several days after the operation, and caused the patient a good deal of suffering; but with this exception the case did well. [Fig. 22 shows the vagina restored to its normal caliber, the form of suture used, and the utilization of the anterior lip of the cervix uteri for closing the fistule without incisions or dissection of the cervix uteri from the bladder, as insisted upon by Jobert de Lamballe. *A B* is the line of cicatrization of the first fistule closed.] "On the ninth day [September 1, 1855] I removed the apparatus, and had the satisfaction of finding an entirely successful result; not the slightest irritation had been produced. The improvement of the patient in every respect was very rapid, and when I discharged her in September she was as active and sprightly as though she had never had a sick day.

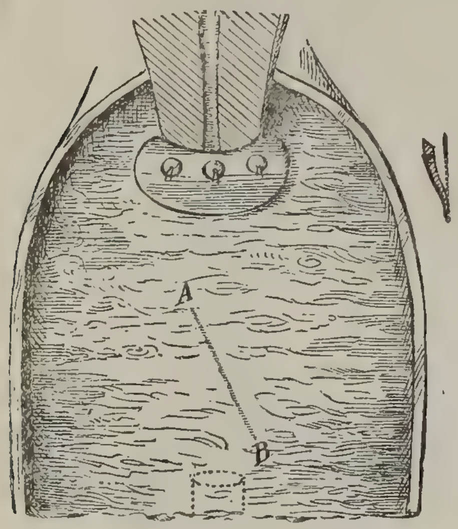

Fig. 22.

"*Remarks.*—The bad health of the patient, the existence of two fistulous openings, a herniated condition of the mucous coat of the bladder, *a morbid attachment of the two walls of the vagina, and an exceedingly irritating quality of the urine, were all circumstances which strongly militated against the treatment. It is, indeed, one of the most remarkable cases that have ever come under my observation, and I may add that a better case for illustrating some of the advantages claimed for the button-suture, and especially that of protection to the denuded edges of the fistule from the poisonous effects of the urine, could not have been selected. After removing the button employed in the first operation, its very shape and size were found impressed upon the parts over which it rested during the healing process, and the pale-red color of the mucous membrane contrasted beautifully with the deep-red and fiery appearance of that which had been exposed to the urine escaping through the upper opening.*"

C.—*Two Vesico-vaginal Fistules, one situated at Center of Septum, and the other near Cervix Uteri—Latter not discovered until after the Former was closed—No Complications present—Each fistule closed at a Single Operation by the Button-Suture Procedure—Patient discharged cured.*

Dinah*, a colored woman, aged forty-seven years, applied for treatment, June 28, 1855: Upon examination, I found a fistule near the center of the vesico-vaginal septum, circular in shape, and sufficiently large to admit the index finger into the bladder. Supposing this to be the only opening, on the 5th day of July I applied the button-suture. On the tenth day it was removed, and the parts found to be perfectly united, not the slightest irritation having been produced by the apparatus. In a few days afterward the patient was allowed to get up; but, to my surprise, there was still dribbling of urine. I apprehended, therefore, that the newly formed cicatrix had given way, and there was a reproduction of the fistule; but, on making an examination, I discovered that such was not the case. I was now at a loss to account for the appearance of urine; but, upon a more careful exploration of the vagina, I found another very small opening, situated far up on the right side, at least an inch from the one I had closed. The whole difficulty was now explained. Another opera-

*Case III, *op. cit.*

tion was required; but, owing to the bad health of the patient, I was not able to perform it until the 10th of September. The fistule, although small, had a peculiarity I had never met with before. It was valvulous—i. e., the opening through the vaginal part of the septum did not correspond to that of the vesical. Two sutures were sufficient to bring the edges together. Things went on well, and on the tenth day I removed the apparatus, and found union perfect.

"*Remarks.*—In this instance the fistulous openings were of eighteen years' standing, the patient old, and her general health not very good; yet the result was as prompt and decided as could have been desired. *One of the great advantages claimed for the button-suture—namely, protection to the denuded edges of the fistule—was again forcibly illustrated in this case.*"

D.—*Two Vesico-vaginal Fistules—Situation below Center of Septum on a Transverse line, one to the left of Median Line, and the other reaching to the Right Lateral Wall of Vagina—Both Angular Fistules, resulting from Closure in the Middle of a large Opening after Ten or more Operations with the Clamp-Suture in the Hands of Dr. Sims—No Complications present, further than the Co-existence of Two Fistules and the Cicatricial Hardening of the Tissues, resulting from the Repeated Cutting-out of the Clamps—Each Fistule closed at one Operation by the Button-Suture Procedure—Patient discharged cured.*

Delia,* a mulatto girl, aged twenty-five years, servant of Dr. Sims, was re-admitted for further treatment September 10, 1855. The case, it will be recollected, was treated jointly by Dr. Sims and myself in May, 1853. He performed his last operation with the clamp-suture at that time, the after-treatment being conducted by me. He used a pair of clamps upon each fistule at the same sitting. Nothing unusual attended the after-treatment. When I examined the parts, however, on the twelfth day, I found that both upper clamps had ulcerated out, and the result was a total failure. It will also be recollected that the case had then been under treatment between three and four years, and that Dr. Sims had, from first to last, performed ten or more operations with the clamp-suture. Here is the patient's own brief account of her previous history, to which are appended the results of my examination and of my operations with the button-suture at this juncture. In my first report it will again be seen that I avoided direct reference to the number of failures with the clamp-suture by Dr. Sims:

" She also states that she was sent to New Orleans, and there treated [after confinement in 1846] for a long time, with but little, if any, benefit. *Since then she has been operated upon several times according to the method of Dr. Sims, but the relief afforded was only partial.* Upon examination, I found two fistulous openings—one about two inches from the cervix (uteri), and a little to the left side; the other, a little larger, was situated far to the right, at a point just where the anterior and posterior walls of the vagina became continuous. [Fig. 23 shows the situation of the two fistules, and the partially detached clamp-suture upon each, as I found them on the twelfth day after Dr.

*Case IV. *op. cit.*

Sims's last operation, May 20, 1853. The dark line between the two fistules indicates the cicatrix of the closure of the fistule in the middle by Dr. Sims in his previous operations.] "On the 10th of September [1855] I proceeded to apply the button-suture to the larger opening. It was my intention to close the other also at the same time, but the patient preferred to wait. Only two sutures were required, and on the tenth day I removed the apparatus, and found union perfect. "October the 18th, I operated upon the other fistule. This I found presented *the same peculiarity that was observed in the preceding case, in being of a valvular form.* Only two sutures were required, and on the tenth day I removed the apparatus, and found adhesion perfect without the slighest irritation in the surrounding parts.

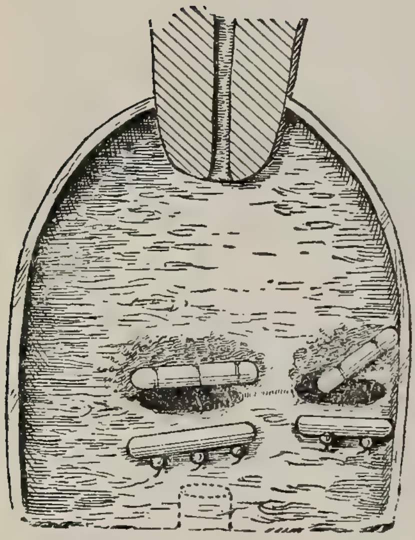
Fig. 23.

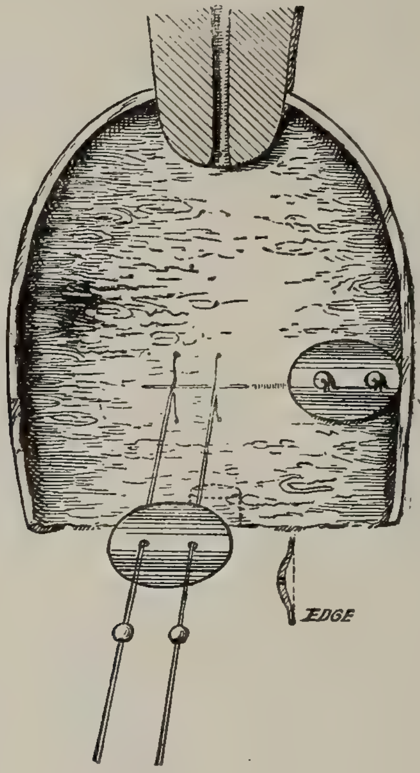

Fig. 24.

[Fig. 24 shows the situation of the two fistules to be the same as in Fig. 23, the one on the right illustrating the button in position, as it appeared at the time of removal; and the other on the left showing the button ready to be slid down upon the sutures and secured with the perforated shot following it, which resulted in a complete cure, October 28, 1855.]

"*Remarks.*—The result in this case was as satisfactory as could be desired; it needs no comments. If it proves anything, it was that the button-suture was better adapted to the case than the clamp-suture, which latter had been long and perseveringly tried.

"CONCLUSIONS.—Having now finished a description of my mode of treating vesico-vaginal fistule, together with the narration of all the cases in which it had been employed, I propose, in conclusion, to compare its results with those obtained by other methods.

"Since the 12th of May last [1855], I have performed seven successive operations without a single failure. This is the amount of my experience with the button-suture. Now, to form anything like a proper estimate of the several modes of treatment heretofore recommended, it is necessary first to ascertain what proportion of the operations, according to each, has been successful when compared with the whole number performed. In this way only can their respective merits be properly set forth. To effect this object I have examined, so far as my opportunities allowed, the records, both of Europe and this country; but, as the data are imperfect, I have not been able to arrive at very satisfactory conclusions. Chelius speaks of Wutzer as having had the greatest success. Of eighteen cases operated upon, three were radically cured. We are not informed how many operations were performed in all. Jobert, by the anaplastic process, cures, I am induced to believe, about one half of his cases. What proportion of his operations fails, I have not been able to learn. Mr. Henry Earle is said to have operated thirty times upon one case before succeeding. The failures here were as twenty-nine to one. Mr. Brown operated ten times upon three cases, and obtained one successful result. The failures here were as nine to one. Dr. Hayward operated twenty times upon nine cases, and obtained three successful results. The failures here were as seventeen to three.

"I am not prepared to state positively what proportion of the whole number of operations performed, according to the method of Dr. Sims, has been successful. Judging from my own experience, and from what I have seen of it in the practice of others [referring alone to that of Dr. Sims], I am inclined to think that the average is not over one-half.* "In regard to my own cases, it may be supposed by some that they were all peculiary favorable, which accounts for my unprecedented success; but this was not the case. A reference to their individual histories will show that they were quite the reverse. The very fact of two of them having resisted the repeated application of the clamp-suture [in Dr. Sims's own hands], is proof sufficient upon this point. The other two were each double fistules, and therefore very unfavorable. One of them, Case II, I consider the most unpromising I have ever seen that was at all curable. In conclusion, I freely acknowledge that the results thus far obtained by the use of the button-suture, although so remarkably successful, do not amount to a sufficient number to justify an indisputable claim to its superiority over all other procedures; and I do not, therefore, urge its adoption by the profession without further trial. This is all I ask for it at present. My limited experience with it has led me to believe that the principles upon which it acts are more nearly correct than any heretofore suggested; but if, upon more careful examination, this be found not true, it will simply prove that the success of my seven operations was a most remarkable and heretofore unheard-of-coincidence.*

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* "A few weeks since there appeared in the *New York Medical Gazette* a notice of the number of the *Louisville Review* containing the above article, in which the writer says that I am mistaken in regard to Dr. Sims's success, and asserts that he (Dr. Sims) has cured, during his residence in New York, thirty cases without a failure.

"From this it would seem that I had done Dr. Sims great injustice. While I here disclaim any such intention, I will simply add that my language in reference to his and other operations, as compared with mine, is explicit, and I am surprised it should have been construed into a meaning so unjust.

"That Dr. Sims has done what is claimed for him (with his clamp-suture) I have not the slightest doubt; but this fact has no bearing upon the statement made by me. The point which I endeavored to arrive at was, what proportion of the number of operations performed according to each of the different methods indicated had been successful. The opinion expressed as to the *clamp-suture* was principally based upon my own experience with it. This amounted to eight operations, six of which had been complete failures. If I am in error as to the average success of other operators with it, it remains to be determined by statistical facts, which are not before me, and, so far as my knowledge extends, have never been published.

"As additional support to the advantages claimed for the button-suture in my paper, I will state that, since it was prepared for the press, I have performed eight more operations, making in all fifteen. My twelfth operation was a partial failure. All of the others were entirely successful.—*July*, 1856.

"I would remark, in this connection, that the statement of the writer in the *New York Medica Gazette*, as set forth in the foregoing foot-note, was purely gratuitous, as I have since satisfied myself from a careful examination of the subject. Dr. Sims had not then cured thirty cases of vesico-vaginal fistule with his clamp-suture. His cures at that date, including all before and after coming to New York, within a period of about eleven years, exceeded very little, if at all, half the number stated, as I shall show in this study of the subject further on."—*September*, 1884.

### SIMPLE STATEMENT OF THE PRECEDING FOUR CASES TREATED BY THE BUTTON-SUTURE PROCEDURE BETWEEN MAY 12 AND OCTOBER 18, 1855.

*Classification.*—Of seven fistules in four cases, there were of the first class six vesico-vaginal fistules, two single, two double, four simple, and two complicated. Of the complicated ones, the first presented induration and thickening of left border of fistule, with cicatricial contraction and distortion of the corresponding lateral wall of the vagina opposite the same point; while the second combined the co-existence of a vesico-utero-vaginal fistule with almost complete occlusion of the vagina below, general vaginitis of a high grade, alkaline urine, calcareous deposits, internal and external excoriations, etc, etc. The vesico-utero-vaginal fistule, belonging to the second class, was attended with loss of tissue and the co-existence of a vesico-vaginal fistule, this being the complicated case with partial occlusion, etc., etc., described in the preceding class.

*Number of Operations.*—Upon seven fistules in two classes, seven operations were performed. Six vesico-vaginal fistules got six direct operations. One vesico-utero-vaginal fistule got one direct operation.

*General Results.*—The treatment of seven fistules of all classes yielded these results: Seven fistules were all completely closed—100 per cent.

*Special Results.*—Of seven fistules treated in different classes, six vesico-vaginal fistules of the first class were all completely closed—100 per cent; one vesico-utero-vaginal fistule of the second class was completely closed—100 per cent. Average number of operations—one to each fistule closed.

*Previous Operations with the Clamp-Suture.*—Eleven by Sims, in Cases A and D—all failures. Two by Bozeman, in Case A—both failures.

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* "MONTGOMERY, *Jan. 1, 1856.*"

Of thirteen operations in all with the clamp-suture, performed by both surgeons, three were upon one small vesico-vaginal fistule, complicated with induration and thickening of the border of the opening, with cicatricial contraction and distortion of the vaginal tract in the same situation, and ten were upon one vesico-vaginal fistule of medium size, without complications, which resulted in closure in the middle, leaving two angular openings as the final resulting failure. This brings us back again to the line of continuous narration of the remaining seven cases of the class of vesico-vaginal fistules.*

## Article II.—Kidney Colic and Renal Calculi. By W. H. Taylor, M.D., Washington, D. C.

Probably few affections are more painful than that which is commonly called kidney colic and which has for its cause the passage of a calculus, or urinary deposit or concretion, from the kidney through the ureter to the bladder.

Practically, all urinary calculi have their starting point in the kidney, the exceptions to this rule being very few. No doubt most of the small urinary deposits and calculi pass out with the urine without symptoms, or with such slight symptoms as not to cause suspicion of calculous disease. According to Beale, in his work on "Kidney Diseases, Urinary Deposits, and Calculous Disorders," uric acid, the substance that constitutes the largest proportion of urinary deposits, is rarely found deposited in crystals in the tubes of the kidney. Oxalate of lime is often found and deposits of phosphates, urates, altered blood, and fibrin casts, are also frequently found in the uriniferous tubules. These various matters may be washed on with the urine through the straight tubes to the pelvis of the kidney, and thence through the ureter to the bladder, and be passed with the urine, as already mentioned, without symptoms; but should this be kept up for any long period of time, through constitutional, this or other predisposing cause, there may be irritation or inflammation set up by constant washing of foreign matter, as it may be considered, over the delicate mucous membrane of the urinary tract, constituting what is commonly called an attack of gravel; or, should these deposits be detained in the pelvis of the kidney, and there form a calculus of some size, and this calculus be dislodged from the pelvis and become impacted in the ureter, then the trouble begins, and the sufferer is subject to all the tortures of nephritic colic, from which it is difficult to obtain even temporary relief until the stone has passed into the bladder. It is much more common to find deposits in the urine, especially in children and young persons suffering from febrile and other disorders, than it is to find subjective or other objective symptoms of gravel or calculous disorder.

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* It will not be irrelevant to here state, *en passant*, that of the twenty remaining cases of this series, only three were ever cured with the clamp-suture—one of the class of urethro-vesico-vaginal fistule, by Dr. R. D. Mussey, of Cincinnati, attended with slight loss of tissue, as illustrated by Fig. 4, and two of the class of vesico-utero-vaginal fistule, by myself, unattended with loss of tissue; the laceration in one extending into the anterior lip of the cervix uteri in this form, Λ; in the other, simply up to the anterior lip, as illustrated by Fig. 5.

I will give some cases that have come under my observation, as examples of ordinary nephritic colic. Case I.—T. D., a young man eighteen years of age, of good constitution and otherwise in good health, was attacked suddenly with kidney colic; his father and uncle had suffered repeated attacks of the disease, and it was considered hereditary in the family. The attack commenced with a sharp pain in the back, running forwards and downwards, just above the crest of the ilium on the left side, down the spermatic cord into the testicle, which was retracted. The pain seemed continuous; opium and morphia by the mouth, in doses as large as it was considered safe to give, did not arrest it, but only deadened it, a short time, and finally seemed to lose all effect. Chloroform was finally administered, and he was brought fully under its influence, but only slept and remained quiet as long as the anesthetic was kept up, and would commence to moan and toss about with pain before fully conscious. Still, the short rest that chloroform gave was apparently of considerable benefit. The attack lasted one week, and left him much prostrated for several days after the stone had passed in the urine.

*Case II.*—J. B., a married man aged 23, had generally very good health and was of a healthy stock. I was called some distance in the country to see this patient March 7, 1874. He had been suffering one week with a pain running from the small of the back forwards and down the cord to the right testicle. There was an increase of pain when he urinated. He had been under treatment for several days, but the attacks of pain had not abated in severity, and the attending physician had given up the case and discontinued his visits. This was the history given me by the patient and his family.

At the time of my visit, which was about 1 o'clock P. M., the man was free from pain, and had been free from pain for between three and four hours, which I was told was the longest interval he had rested from pain since the commencement of the attack; he was very pale and very much prostrated; his tongue was white and broad; pulse slower than normal and easily compressed; pupils widely dilated; respiration blowing or panting, and more frequent than natural. I was told that during some of the most violent paroxysms of pain he was generally convulsed and had to be held to keep him in bed. He had no fever at the time of my visit, and I understood there had not been much indication of fever at any time. I prescribed Dover powder and bicarbonate of soda, and also twenty-grain doses of chloral hydrate. Pain set in again with great severity during thc evening, and the medicines prescribed were given without much regard to directions given, until the pain ceased and he became fully under the influence of the chloral, when he slept soundly all night. In the morning he awoke free from pain and did not have any more attacks. The stone, it is presumed, had passed into the bladder, though it was not ascertained to have been subsequently expelled with the urine.

*Case III.*—S. W., a married man, age fifty years; street-car driver; taken sick December 5, 1884, with violent pain in the back, running around the crest of the ilium on left side, and down into the extremity of the glans penis, sometimes passing down inside of left thigh. I was called in on the third day of the attack, and found the patient complaining very much of pain and soreness in the left flank, and upon firm pressure a very tender spot was discovered just above the crest of the illium and a little towards the front; pulse and temperature above normal slightly; tongue coated with brown fur, edges and tip of tongue red; some irritability of stomach; bowels had been regularly moved; urine passed in good quantity; complains much of not being able to sleep at night, the attacks of pain being of more frequent occurrence and more violent at night. Prescribed twenty grains of chloral hydrate and ten of bicarbonate of soda every four hours, and directed abdomen to be covered with raw cotton and oil silk over the cotton.

December 8. Had a good night's rest after two doses of chloral hydrate; pain not so violent, only a dull aching in left side, sore spot moved a little lower down the groin and more to the centre of the body; medicine to be continued every four hours.

December 9. Has had no bad attacks of pain since commencing the chloral hydrate; rested quite well last night; passes considerable urine; sore spot has moved down over bladder on left side; can sit up in bed a considerable part of the time; appetite returning. Ordered two doses of medicine during the day.

December 10.—Condition an improvement on yesterday; is up out of bed sitting in a chair. There is still soreness over the bladder, left side. Urine examined by Mr. Hofer, of Children's Hospital; Sp. Gr. 1017; reaction acid; no albumen; no sugar; microscopically, by Dr. Kolipinski, Children's Hospital; a few red and white blood corpuscles; a few uric acid crystals; epithelium from pelvis of kidney. Chloral hydrate and bicarbonate of soda discontinued. Ordered potass, iodid. in infusion of gentian. From this time there was a gradual improvement, and in three weeks time he was able to resume his duties as a car driver. No stone has yet been known to pass when urinating.

In case I. the pain was continuous, apparently from the time the calculus engaged in the ureter until it dropped into the bladder. In cases II. and III, the pain was intermittent; in case II. it was entirely so. In case III. there was all the time an aching between the more violent paroxysms of pain. In case II. the suffering endured by the patient during the paroxysms was described by his wife and attendants as being dreadful to behold; and, as already stated, some of the attacks ended in convulsions. I was told that in the last paroxysm, which occurred shortly after my visit, he appeared to suffer more than in the preceding ones, until the chloral was given, when there was slight abatement of pain; the relief was more marked after the second dose, perceiving which, he insisted upon taking the medicine at short intervals until it put him to sleep.

I wish to call attention to the fact that in the first case chloroform was the only thing that gave any rest from pain; and I would call particular attention to the circumstance that in the other two cases chloral hydrate gave apparently almost immediate relief from pain. Of course the action of a drug in two or three cases does not definitely prove anything; but it gives encouragement to further trial when the result is apparently so favorable as in the instances just narrated. I do not mean to say that the use of chloral hydrate in nephritic colic is new or original, but merely to put on record the action of the drug in these two cases. As an anodyne in other painful disorders, I have not found chloral hydrate give very satisfactory results, and I have heard this complaint from others. I have heard that chloral hydrate in full doses would produce speedy dilatation of the cervix and os uteri in labor, and in one instance I think I saw it produce this effect to a certain extent. May the drug not afford relief in kidney colic by relaxing the ureter, at the same time that it quiets the vaso-motor spasm caused by the reflex irritation of the calculus, and thus increasing the flow of urine, facilitate the passage of the calculus in two ways?

There is diversity of opinion in regard to the cause of calculous disease of the kidney, as there is in regard to the etiology of most pathological processes. Beale is inclined to the opinion that renal diseases have their starting point from some morbid or toxic matter in the blood, either introduced from without or generated within by some disturbing element, such as cold, for example, and that the deleterious matter has an affinity for the kidney as a point of elimination, or falls upon that organ with injurious effect, because of its being a weak point in the organism of the particular individual, from hereditary or acquired defect of constitution.

Errors of diet may produce a condition of the blood favorable to the formation of deposits in some of the secretions, and this predisposition may be handed down from one generation to another, the same errors in diet also continuing with each succeeding generation, until a decided hereditary taint is effected, and families and, indeed, whole communities, may become subject to those constitutional disorders. Such conditions would be more likely to obtain in old, settled countries, or in districts of country where the population was not subject to frequent change, and where the habits and modes of living were the same from one generation to another. Basham in the article on calculous diseases of the kidney, "Reynolds' System," says that calculous disease of the kidney is peculiar to no country or climate, but goes on to say: "At the same time it does prevail more in certain countries and districts." He then enumerates certain districts in England, and says the disease is also prevalent in France, Iceland, Egypt, and the Netherlands.

Some years ago I attended a lecture on China delivered by Dr. Parker, who had gone to that country as a missionary, but had spent many years of his stay there in the practice of his profession as a physician. He said that calculous diseases were very prevalent in all parts of the country that he had visited, and that he had operated very many times, and exhibited a large collection of calculi for which he had cut. He said he had met with remarkable success in his operations. His patients were mostly in the lower walks of life, and lived principally on rice and vegetables. I recollect the calculi exhibited were large, some very large, and were all light-colored, composed mostly, I presume, of phosphates and urates in various combinations. Some of the calculi were as large as hens' eggs.

Heredity as a factor in the causation of disease is not given as much consideration now as formerly, and in some respects this is a good thing; still, at the same time, when facts go to show that hereditary predisposition or influence does play a prominent part in certain pathological conditions, calculous disease being undoubtedly one of these conditions, it is well to give it due consideration, to the end that such measures may be adopted as will have in view the breaking up of this heredity vice, as well for the benefit of the generation of patients now under treatment as for the generations to come after.

Alcohol, that comes in for so large a share of blame in all kidney diseases, does not appear to have much share in causing calculous diseases. Beale says alcohol does not directly give rise to calculous disease of the kidney. The cases that I have given did not occur in men addicted to drink. In the case of the first young man, where the disease was thought to be inherited from the father, who had suffered several severe attacks, the father was a clergyman of strictly temperate habits, and led an active life.

The other two cases were in laboring men of temperate habits.

Age has an influence in the predisposition to calculous deposits, the disease occurring most frequently in children, then again after the age of fifty, until the approach of old age. Harley in his work, "The Urine and Its Derangements," says there is no age exempt, and mentions Mr. Shepherd's case, where three calculi were found in the kidney of a child ten months old, and a case occurring in his own practice where fifty-nine uric-acid calculi were found in the kidney of a man aged sixty years, some as large as peas.

Dr. Wm. Roberts, "Urinary and Renal Diseases," (4th Ed., 1885) says calculous disease is more common in males than females, that in the deaths from this cause during the ten years ending 1866, for every female nine males died. He gives the causes of deposit as: (*a*) excessive proportion of preciptate; (*b*) too acid urine; (*c*) alkaline urine, very rarely a cause; (*d*) deficiency of chloride of sodium and alkaline of phosphates, which allow uric acid to crystalize out; (*e*) presence of cystine or xanthin; (*f*) accidental presence of body to form nucleus.

Varieties of urinary calculi given in the order of frequency of occurrence, are: Uric acid; urates; oxalate of lime, or mulberry calculus; cystine; xanthin; fatty concretion; carbonate of lime; fusible calculi; fibrine and altered blood; indigo calculi.

I have to thank Dr. D. S. Lamb for showing me some interesting specimens of renal calculi in the Army Medical Museum, D. C., and giving me the history of some of the cases. No. 9328, found by Dr. Lamb in the kidney of a lady who died from intestinal obstruction caused by an annular constriction of the transverse colon by an adeno-sarcomatous growth. As far as known, there had been no recognized symptom of kidney trouble during this patient's life. The calculus is about two and a half inches long, with three branches from a half to three quarters of an inch in length. It was situated in the pelvis and infundibula, the branches pushing into the calices; in color it is reddish brown, and looks very much like a piece of coral. Calculous deposits are very often found in individuals the subjects of malignant disease. Roberts mentions an indigo calculus, the only one of the kind on record, described by Ord, in Path. Transact., Vol xxix, that was found in the right kidney of a woman that died of sarcomatous tumor of the left kidney.

No. 9095. A considerable number of small calculi found by Dr. Lamb in a cyst in the kidney of a man that died of cardiac disease. These calculi look very much like mustard seed, and are composed of urates.

No. 8040 is composed entirely of phosphates, rather a rare specimen.

No. 8041. Oxalate of lime, eighteen in number.

No. 8042. Quite a large uric acid calculus, oxalate of lime nucleus. According to Carter and Beale, oxalate of lime or uric acid in globular forms, with colloid matrix, forms most frequently the nucleus of urinary calculi.

No. 8501. A large calculus of phosphate of lime weighing 188 grains, found in pelvis and calix. This specimen resembles specimen 9328, except in its color, which is light chalky looking.

Nos. 8554 and 8555. Very beautiful preparations, with kidney, exhibiting calculi in situ. In one specimen the calculus is seen plugging up the ureter, as though it had just started on its downward journey to the bladder.

No. 8942. Black calculi composed of altered blood; they much resemble the biliary calculi described by Thudicum as composed of altered cholochrome and lime.

No. 9059. A very rare specimen of xanthin calculus, being the eighth on record. (Presented by Dr. Porter.)

I wish to say in this connection that there are many interesting preparations in the museum connected with the Surgeon General's Office, and many valuable works in the library, a number of which, with the kind assistance of Dr. Wise, I have been enabled to consult, and it will no doubt be a matter of interest to many medical men to know that Congress has made an appropriation for a building suitable to the preservation of this valuable property.

In speaking of the preventive plan of treatment in calculous diseases, Harley in his work, "Diseases of the Liver," says it is likely in the future that the conditions leading to calculous formations will be so well understood, and such measures taken for their prevention, that operating for stone will be a rare occurrence.

I must say that I do not look for a very speedy consummation of this very desirable degree of perfection in medical foresight; still much may be ascertained upon a careful examination of the urine and its deposits, upon which to base a pretty accurate diagnosis. We may say that in renal calcareous deposits we are practically and chemically only interested in the first four varieties, that is, uric acid, oxalate of lime, urates, and cystine calculi, all of which occur with acid urine. Cystine may be eliminated from the number at the start, unless there is a family history showing hereditary disposition to cystine deposit, or, in other words, cystine diathesis, or unless cystine crystals, six-sided or coffin-shaped, be found in the urine. Treatment suitable to the first three forms of deposit would also be very appropriate in the cystine diathesis, as far as it goes; the only additional suggestion being to avoid foods and medicines likely to increase the formation of sulphur compounds, sulphur being largely an ingredient in cystine calculus.

If we have very acid urine, we may be almost sure that the deposit is uric acid, but urates also deposit in acid urine. The solvent treatment proper for these forms of deposit, according to Roberts, Harley, and Beale, is the alkaline treatment. When oxalate of lime or phosphatic deposits are found in the urine, the administration of mineral acids would be the solvent treatment indicated; and, at the same time, when the mulberry calculus is suspected, rhubarb pies and tarts and sorrel salads as articles of diet, and water containing lime, should be avoided. Acid wines are also interdicted almost universally, but it is questionable whether either the acid or the alcohol they contain has any potent effect in producing urinary deposits. In speaking of alkaline treatment, Harley says it makes a very material difference as to the manner in which the alkali is administered; if it is given on an empty stomach it is more likely to render the urine more acid than otherwise, but if given with the food it will produce an alkaline effect upon the urine which may be kept up for some time.

Roberts, in speaking of the solvent treatment in calculous disease, says we may render the urine alkaline to a certain extent, but not much can be done to render it acid, as only a certain amount of acid is allowed to pass through the kidneys. It is for this reason that I do not credit acid wines with the causation of calculous deposits. Diuretic treatment, the popular treatment for all urinary disorders, should be adopted with caution in nephritic calculous diseases; stimulating diuretics should be avoided; the safest diuretic is water. I have seen blood in the urine following the administration of turpentine for imaginary trouble in the kidney.

## ARTICLE III.—REPORT OF A CASE OF SO-CALLED METASTASIS OF ACUTE RHEUMATISM FROM THE SHOULDER TO THE MENINGES OF THE BRAIN, RESULTING FATALLY.* BY C. S. WOOD, M.D., New York.

Mrs. S. M. C., aged 38, married, living in good circumstances, of a nervo-sanguine temperament, inheriting a strong rheumatic tendency, with which disease (rheumatism) she has suffered much all her life, having had repeated attacks of an acute character, during the last few years, usually taking her from one to two weeks, when she would resume her ordinary duties and amusements, although never free from pain and stiffness about the joints. Has borne two children, one of which, a boy of twelve years, is now living. In these different attacks the disease would assume more or less of a local character, at one time being principally confined to the joints of the upper extremities, at another to the feet and ankles, then again it would be unilateral. With these exceptions she enjoyed a fair degree of health. She was attacked on the 19th of September, 1884, the day following her attendance at a theatre, where she was exposed to cold and dampness, the trouble being principally located in the left shoulder-joint, the pain of which was exceptionally severe, much more so than on previous occasions when she had been under my observation, requiring from the first large and repeated doses of morphine to give her any rest.

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*Read at the scientific meeting of the Fifth District Branch of the New York State Medical Association held at Poughkeepsie, May 19, 1885.

Salicylate of soda was also administered in full doses and at frequent intervals, viz., grs. xv. h. 3., which had always before relieved her, in the space of forty-eight hours, of all the most distressing symptoms. Now, however, this remedy failed entirely, which I attributed to the concentration of the disease in one joint, which is the experience I have frequently had with this medicine. The joint was kept surrounded with cotton-wool from the first. The pulse ranged at about 120,and the temperature from 101 to 102½. She could not have the arm moved, neither could she endure the thought of having the bed clothes disturbed, and even a jar upon the carpet from a footstep would intensely aggravate her sufferings.

Alkalies were now substituted for the salicylate, with the morphine continued as occasion required. Thus the case progressed with but light changes in any respect, until the 17th, or eight days from the initial symptoms, when the temperature began to rise, vomiting ensued, and recurred at frequent intervals for twenty-four hours, with a tendency to coma, at which time she began to use her arm voluntarily, even putting the hand of the side affected to the head without complaining of pain. She now began to suffer from pain in the head, often saying, "How my head hurts me!" then relapsing into a drowsy condition, even though no opiate had been given her for more than twenty-four hours. Recognizing the fact that there was metastasis, or a transfer of the disease to the meninges of the brain, a blister was applied to each arm, mustard to the feet and ankles, and free catharsis was produced, all of which, notwithstanding, the coma deepened, convulsive movements occurred,the pupils contracting and dilatalternately, irrespective of light, with paralysis of motion and sensation, and low, muttering delirium, like one in the latter stages of typhoid fever.

During the last twenty-four hours she lay unconscious of anything that was transpiring around her, oblivious to all suffering, as well as to the presence of her friends and attendants, and died on the tenth day of her illness. Several hours before death the pupils were contracted to an extreme degree, even though at this time she was entirely free from the influence of opium.

The temperature had risen from the time of the commencement of the vomiting, to 4°, 5°, and even 6° before death.

Our late lamented friend and associate, Dr. A. S. Church, saw the patient with me several times, and fully concurred in the diagnosis, as well as the treatment adopted. No autopsy could be obtained.

My object in reporting this case is not to advance any novel ideas, but to place on record a form of complication of rheumatism that is of infrequent occurrence, and therefore of interest; Dr. Church remarking to me then that, in a large practice extending through a lifetime, he had never met with a similar case. Authorities, although mentioning cases of brain complications connected with acute rheumatism, speak of it as of rare occurrence.

I have been so unfortunate as to meet with several such cases in a practice of thirty-five years, although most of them, according to my notes, occurred in the army, where we would naturally infer that the excitement, exposure, and mode of living, might be potent factors in its production. One of these cases was reported by me at the time to one of our sister societies. Yet, most authorities agree that the complication is so rare that it is not to be looked for or expected. Undoubtedly most of these cases prove fatal, while a certain proportion recover in general health, but with their mental faculties wrecked in part or wholly.

Watson, in his "Practice of Medicine," simply refers to such a complication without making any comments upon it.

Loomis, in his recent work says, "Cerebral symptoms are always attended by a high temperature. The cerebral and cardiac phenomena are not due to a metastasis, in the strict sense of the term, nor yet are they complications." Yet he says, "There is some bond of connection between the cerebral and heart lesions and the joint affections; the exact nature of the connection is not known."

Flint remarks, in speaking of this complication, as follows: "The meninges of the brain are sometimes affected. Examples, however, are exceedingly infrequent; active delirium, convulsions, and coma are events which have appeared in a small number of cases. In some of these cases the appearances denoting meningitis have been found after death, but in other cases the cerebral symptoms were devoid of the evidence of inflammation; it may be conjectured that rheumatic inflammation may attack the meninges of the brain, leaving no traces after death, as has been observed with respect to the joints."

Senator, in speaking of acute rheumatism affecting the different organs, says "that among cerebral complications, meningitis has been observed with varying frequency in different localities and at different times." Cases may be found in Stoerk, Stall, Scudamere, etc. Neimeyer alludes to meningitis rheumatica. Lebert and Dowse have each reported one case. On the whole, however, this complication appears to be much less common in temperate than in hot climates, as in Turkey.

In a fair proportion of cases the implication of the brain is notified by various psychical disturbances, which cannot be ascribed to the rapid rise of temperature, but take the form of true insanity, of mental disease in the narrower meaning of the term.

They are provoked, or, at any rate, promoted, as Tuengel was the first to point out, by the pain and want of sleep. They exhibit every variety of excitement and depression from well-marked mania to melancholia; sometimes they last but a short time, and disappear without leaving any trace behind. Sometimes they are protracted into the period of convalescence. Sometimes they may persist after complete recovery, when they constitute the protracted form of brain disease which Griesinger was the first to recognize, or at least to describe.

But I will cite no further authorities, as my object, as above stated, was simply to present the facts connected with this case, on account of the rarity of the affection, and in the hope that, in the experience of others, it has not in their hands proved so rebellious to treatment as in my own.

NEW YORK, May 12, 1885.

## ORIGINAL TRANSLATIONS.

### CLINICAL AND THERAPEUTICAL CONSIDERATIONS UPON SCROFULA AND HEREDITARY SYPHILIS, By DR. CH. ABADIE. Translated from *L'Union Medicale*, by H. McS. GAMBLE, M.D., Moorefield, West Va.

During the first and second periods of childhood, up to adolescence, the eyelids, the conjunctiva, and especially the cornea, are frequently the seat of acute or chronic inflammatory processes considered usually as belonging to the lymphatic or strumous diathesis. I propose to demonstrate in this work that numerous so-called grave ocular lesions of this nature are by no means modified by the anti-scrofulous treatment proper, and that where cod-liver oil, bitters, peruvian bark, etc., sometimes yield but insignificant results, the iodide of potassium and mercurial preparations, managed as will be presently described, often accomplish a rapid cure.

Here is at the start a primary leading fact which is evolved out of the numerous accounts that I have been able to collect recently. The attention once directed to this subject, there will be an opportunity to see if the dermatologists, on their side, will arrive at the same conclusions, and if the malignant scrofulides which are so little modified by the influence of so-called anti-scrofulous medicaments will not yield in their turn to a specific treatment managed and directed as will be explained directly. I have no intention of generalizing the results of a study as yet too restricted, and of maintaining that scrofula is nothing else than hereditary syphilis, but what I seek to prove with the help of clinical observations, is that a number of grave manifestations, considered up to the present time as scrofulous, are nothing else than symptoms of hereditary syphilis.

Upon what data, on the whole, was based until recent times the distinction between scrofula and syphilis? 1st, on the one hand, upon the difference of the manifestations of the two diatheses; 2d, on the other hand, and more especially, upon the difference of behavior of the treatment called specific. Let us examine more closely what foundation there is to-day for these distinctions.

Scrofula would attack by preference the ganglionic system during infancy; later on, the osseous tissue and the articulations; in adult age it would strike the integuments, locating itself preferably upon the face, where, under the form of lupus, it would invade the deep tissues as well as the surface. It would be remarkable for its tenacity, and often for its stubborn resistance to all kinds of treatment.

Syphilis, on the contrary, extends readily to the whole cutaneous surface; it has no precise localization, and may attack no matter what organ. Save the forms altogether malignant, moreover quite rare, it would evolve quite rapidly and would be, in the immense majority of cases, amenable to the specific treatment.

Such was, in a word, the state of science upon this question but a few years ago. But to-day observations made upon all sides by specialists of high standing have come, and are coming yet every day, to modify in a singular manner our knowledge of this subject of such high practical interest. It is precisely in this, to speak of it in passing, that exists one of the great advantages of specialties in permitting the human mind to concentrate itself upon the attentive and constant study of one question, without being diverted every moment from the object under consideration by the thousand incidents of a too vast and too extensive practice.

The syphilographers of Paris and Vienna (and it is proper to place here in the front rank Prof. Fournier) have shown in fact that syphilis was never extinguished during the whole term of natural life, and that symptoms of a specific nature might manifest themselves twenty, thirty, forty, fifty years even, after the initial chancre.

Formerly, only those disorders of syphilis were known which develop in the first years following the inoculation. In this period, in fact, the infection of the organism betrays itself by manifestations which are nearly the same in all the patients; but later it is quite otherwise: the older the syphilis, the more complex and varied its manifestations become; the more singular it is, capricious in its aspects, in its progress, in its manner of comporting itself in regard to treatment apparently the most rational; in a word, the more difficult it becomes to recognize and the more it baffles the observer. It is evident, for example, that the symptoms called tertiary, and which in our opinion it is necessary to know how to distinguish from those that we call *tardy*, have been well understood and assigned to their true origin only since the discovery of the therapeutic action of iodide of potassium.

How many testicles and how many breasts must have been removed in past times, as though attacked with fungi or with cancers, when it was a question of simple ulcerated gumma.

Really, the so-called tertiary symptoms of syphilis escape us less, precisely because they commonly yield readily to iodide of potassium, which serves, so to speak, as the touch-stone for recognizing them. It is not altogether the same for what I shall call the tardy symptoms of syphilis, or, to speak more precisely, the symptoms of an old syphilis, which are far from always belonging to the category of symptoms called tertiary.

I believe that it is unnecessary to confound malignant with syphilis of old date. The malignant form may show itself even at a time very close to the début, during the stage called secondary. It is characterized by the gravity, the generalization of the lesions, sometimes even by the rapidity of their evolution and their resistance to all treatment. In syphilis of old date, it is a very different thing; the symptoms are not always grave, but they are complex and tenacious, following no rule: sometimes disappearing at a given moment, to reappear aftewards later on, sometimes ameliorated by specific treatment, sometimes, on the contrary, aggravated, then yielding at length spontaneously at a moment when it is least expected. Besides showing itself always necessarily in persons of advanced years, the influence of other diatheses seems to intervene, so that sometimes the diagnosis becomes most difficult and the treatment extremely delicate. It is, for example, to the account of an old attack of syphilis that must be charged those cases of palmar and plantar psoriasis of such tenacious and irregular character; those lesions of the tongue so frequent and yet so illy understood, which get better one day to become aggravated the next, which during their whole evolution never assume a veritable character of malignity, and persist for long years under the form of fissures, of erosions, of cracks, plowing the tongue in every direction, without finally producing any extensive disorders. To-day when these tardy manifestations of syphilis are beginning to be pretty well known, one will recognize, by paying some attention to them, that they have a certain analogy with those of hereditary syphilis of which the clinical study is being actively pursued every day. Already a very important distinction in hereditary syphilis has been established and deserves to be preserved.

The symptoms which supervene at the very moment of birth have been separated from those which show themselves much later after puberty.

The first belong to syphilis called congenital; the others to hereditary syphilis, properly so-called.

The manifestations of congenital syphilis which break forth either at the very moment of birth, or during the following months, have very nearly the same physiognomy as those of the secondary period of acquired syphilis. These are generalized eruptions, mucous plaques, etc., which yield easily to specific medication and disappear promptly under the influence of mercurials, frictions, liquor of Van Swieten, etc. This is understood, moreover: the children who present these symptoms are most frequently the issue of parents whose syphilis is recent, in the midst of the secondary stage, or who have just passed it. It seems that the same symptoms of the same stage are transmitted from the parents to the children, and behave in the same manner in the one and the other. It is by no means the same in tardy hereditary syphilis; it is ordinarily much later, from eighteen to twenty years, that these symptoms manifest themselves. We ophthalmologists see them particularly supervene under the form of parenchymatous keratitis, and it is greatly to the credit of Hutchinson to have shown that this corneal affection was habitually under the dependence of hereditary syphilis. Parenchymatous keratitis belongs clearly, in all its features, to tardy syphilis; it has an insidious début, an irregular march; it can not be foreseen in advance how it will comport itself in regard to the different medications which shall be directed against it. Its duration is very variable; generally nothing stops it in its evolution; then it disappears spontaneously of itself, when the patients seem to have given up in despair. This irregularity of manners accounts at the present time for the ophthalmologists being far from agreed as to its nature. Some, recognizing the correctness of the observation of Hutchinson, consider them as belonging to hereditary syphilis; others, basing their opinion solely upon the inefficacy of the specific treatment, maintain that it is of a scrofulous nature, lymphatic, etc. This is what I am able to say in this regard.

In the great majority of cases, in the presence of a parenchymatous keratitis of a grave form, a careful inquiry made with discernment reveals the existence of syphilis in the progenitors.

Often, it is true, parenchymatous keratitis cannot be modified in its evolution by any treatment, including the *ordinary* specific treatment; but in this again it approaches the symptoms of syphilis of *old date*, and behaves like them. Its apparent indifference, in respect to the ordinary specific treatment, does not then constitute a peremptory argument in favor of its non-syphilitic origin; and this is a point that I desire to set in bold relief.

In a general way, it may be said that the therapeutic action of the medication called specific differs according to the stages of the syphilis. In the secondary stage the protsiodide salts act with an incontestable efficacy; at a later period these same protiodide salts are absolutely insufficient, and they completely fail when, on the contrary, other preparations, such as the biniodide and the bichloride, still give good results.

Certain more tardy manifestations require the association of the salts of mercury with the iodide of potassium (sirop de Gibert), and yield only to the action of these medicines combined; for others, finally, mercury, at least with the salts *employed up to the present time and given internally*, seem more hurtful than useful, and the iodide of potassium alone succeeds. It is undeniable that such or such manifestation of syphilis resists a certain mercurial preparation, whilst it yields to certain others. As a general rule, the farther back the syphilis dates, the more delicate becomes the choice of the medicament and its mode of administration, and it would then be necessary to take care not to conclude that such a symptom is not syphilitic because it is not cured by such a remedy, and nothing proves that another salt related to the first, and administered in a different manner, will not act where the other has failed.

A striking proof of what I advance has been furnished lately by the subcutaneous injection of the peptonate of mercury, and I believe that M. Martineau was largely in the right in insisting upon the high therapeutical value of this remedy thus administered. One has succeeded in this manner in putting an end to the troubles which for years had resisted all the other mercurial preparations.

But where I differ a little with M. Martineau, is when he wishes to generalize and apply this treatment systematically to syphilis, whatever may be its duration. I believe, on the contrary, that it must be reserved for tardy syphilis, which resists the salts of mercury usually employed, whilst the latter, whose action upon recent syphilis remains incontestable, ought not to be abandoned. These therapeutic considerations apply in all points to hereditary syphilis, whose manifestations are taken sometimes for scrofula, simply because they resist the ordinary specific treatment.

Among the most convincing facts, and which seem to me the most demonstrative in this respect, I will cite the following: About five months ago a child fifteen years old was brought to me by his father, on account of an ocular disease, the appearance of which dated back eight months. I discovered a chronic iritis in the left eye, which had determined and brought about a complete obliteration of the pupil by exudation. Besides, the cornea is grayish, infiltrated, and opaque in its lower third. On this side vision is reduced to a simple quantitative luminous perception. In the right eye there are analogous lesions, but at a much less advanced stage. The cornea is commencing to show infiltration; exudations are causing the pupillary border to adhere here and there; but the center of the pupil is still free. Continuing my investigations in order to try to discover the origin of this ocular affection, I ascertain the presence of an enormous engorgement of the sub-maxillary ganglia and of the pre-auricular ganglia; that on the right side in particular has attained the volume of a hazel nut, and is very apparent. This boy presents, besides, a very singular lesion, which I have never met with or seen described anywhere; there are little nodosities of the size of a pea scattered a little everywhere over the surface of the body. These tumors are seated immediately under the skin, which everywhere presents its normal color; they are not adherent, and, taken between the fingers, they have nearly the dimension and the consistence of a little dry pea. They exist nearly everywhere under the tegumentary surface, but principally under the skin of the arm.

The father, interrogated carefully, confessed to me that he had had syphilis sometime before his marriage, and that he had communicated it to his wife. In him the syphilis had been relatively mild, but in his wife it had been more grave. The child whom I examined had, however, come into the world in good health. During the first period of childhood he had had neither gummata nor ganglionic engorgements, but towards the age of twelve years the sub-maxillary ganglia began to increase in volume, his complexion became pale, his muscles became soft and flabby, the appetite was lost; there supervened an obstinate constipation; to these physical changes succeeded an intellectual indolence, indifference to everything, then sadness. At this stage several physicians of renown were consulted; they considered this child as a scrofulous subject, and prescribed cod-liver oil, syrup of iodide of iron, a residence at the sea side, etc.

In spite of the employment of these different means, the general health remained indifferent, and the local lesions only became more accentuated. The sub-maxillary ganglionic masses continued to increase, the little sub-tegumentary nodosities, of which we have already spoken, were developed a little everywhere, and finally the ocular lesions appeared. The iodide of potassium was administered in tolerably large doses (1 gramme, then 3 grammes a day), but it seemed to have but an insignificant effect, and the ocular lesions especially continued to develop; the pupil of the left eye ended, in spite of everything, by being invaded with exudations, and was obliterated. The situation became more and more critical from day to day, and in the face of the failure of these different medications the parents, discouraged and having arrived at that stage when one consults nearly everybody, came to see me. My impression was that the ocular lesions were almost certainly specific, and that it was a question of syphilitic troubles supervening upon a scrofulous patient, and that it was, perhaps, because of the complication of these two diatheses that the treatment had failed. We are going to see by the sequel that there was nothing of the kind, and that all the *disorders arose from syphilis.*

I subjected this little patient to injections of peptonate of mercury; I practiced this twice; but they were so painful, so badly borne, that, fearing discouragement, I substituted for them the following treatment, very much in vogue in England, and which I obtained from the eminent physician of St. Louis, Dr. Ernest Besnier:—

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| Corrosive Sublimate | 5 centigrammes. |
| Iodide of Potassium | 6 grammes. |
| Alcohol | 15 ,, |
| Syrup | 20 ,, |
| Water | 200 ,, |

Three soupspoonfuls (cuillerées á soupe) a day for three days, suspend three days, then take again three days, and so on successively.

After fifteen days of this treatment, the amelioration had become very manifest, the ocular lesions were retroceding; but., strange to say—and this constitutes the capital point of this history, and gives it its demonstrative value—the sub-maxillary ganglionic masses melted away visibly, the sub-tegumentary nodosities gave way and were reabsorbed; consequently these symptoms, considered as *scrofulous*, which for months and years had resisted all other treatment, disappeared now as by enchantment. After a month and a half of this treatment the ganglionic engorgement had completely disappeared, and there was not left a trace of the sub-tegumentary nodosities; the appetite had become excellent; the obstinate constipation had ceased; the spirits were bright enough, and the capacity for work much greater. In a word, all the disorders which up to that time had been attributed to the *scrofulous constitution* had completely disappeared, and that in the space of a month and a half, under the influence of *insignificant doses of sublimate associated with minimum doses of iodide of potassium.*

Another example : A young man, twenty years of age, presents himself at my clinique, attacked with parenchymatous keratitis of grave form. The first appearance of the disease was about two months ago. The left eye was attacked first, then the right eye was taken in its turn. Up to that time the general health had been perfect. This young man is a coachman. The ocular disease progressed with such rapidity that at the end of a month's time blindness was complete, and he presented himself at our clinique led by his mother. We determine a double parenchymatous keratitis of a grave form (malignant form which I have heretofore described). The corners are completely opaque, reddish, and vascularized at certain points, reaction is lively, photophobia extreme, blepharospasm, violent pains at intervals.

The mother of this young man gives me the following information :—

Married at 21 years of age, she claims never to have been sick, but her first pregnancies were unfortunate. Her first child died at the age of four months, then a second before birth, a third likewise, and the fourth is the patient in question. We will call attention to the great mortality of the early pregnancies, a mortality justly regarded as characteristic of the syphilitic infection. Be that as it may, this young man has always been perfectly well until twenty years old ; he has never had the slightest complaint during his childhood ; never impetiginous eczema, nor ganglionic engorgements ; no disease, either acute or chronic ; *dental system perfectly healthy.* This young man is well developed, his muscular strength, is powerful ; in a word, health perfect up to the moment when the grave ocular affection burst upon him like a clap of thunder.

As to treatment, we prescribed two grammes of iodide of potassium a day instillations of atropia ; a tonic regime ; wine of cinchona, etc. At the end of a fortnight no amelioration, rather aggravation ; we increased the dose of the iodide to three grammes, then to four ; no appreciable change ; we prescribed then mercurial frictions, which we rapidly carried to the quantity of six grammes a day. This very energetic treatment, as it is seen, was pursued for three months without interruption and without any appreciable result, unless it be a little emaciation and a certain degree of loss of strength. The condition of the cornea was all the time pitiable, and the prognosis seemed to me bad. Under these circumstances, the idea occurred to me to replace the mercurial frictions by injections of peptonate of mercury. The first injection of five milligrammes was followed by a surprising result, in that this patient, who for five months had been tormented by photophobia, blepharospasm, and extremely severe pains, began freely to half open the eyelids.

The next day a new injection, and again improvement ; at the fourth there was no longer doubt that the corneæ were clearing up. From that moment the improvement made extraordinary progress and visibly, so to speak, and at the twentieth injection, consequently at the end of twenty days, the corneæ had recovered an almost perfect transparency. It is the first time since I began the practice of ophthalmology that I have seen a keratitis as grave as this arrested clearly in its progress and cured as quickly and in as complete a manner.

Since then I have met with analogous cases, but I must confess, however, that the injections of peptonate have not always appeared as heroic. In certain cases they have even seemed to give no result; at other times it has been necessary to associate them, in very small doses (two to three milligrammes only), with very large doses of iodide of potassium, four to five grammes a day' and, what is very remarkable, these two medicines given *separately* seem to have, neither one or the other, a very evident curative power, whilst given simultaneously their good effects become manifest.

I have remarked also that in these rebellious, difficult cases, there was often an advantage in proceeding by sudden interruptions, that is to say, that, after having given for a month or two *very large doses* of iodide associated with *small doses of sublimate*, it was necessary to suspend *brusquely* all treatment, and it is often at this moment only that the improvement supervenes in an almost instantaneous manner.

Here is still another very instructive case, which proves how difficult under such circumstances is therapeusis, and which shows at the same time that there enters into the mechanism of these cures a factor with which it is necessary to reckon—the factor time. This likewise concerns a parenchymatous keratitis which for a long time had resisted the iodide of potassium, in large doses, and mercurial frictions. One might have concluded that the affection was scrofulous and not syphilitic. However, as will be seen, the antecedents, especially on the mother's side, could leave no doubt as to the nature of the disease. The young girl, the subject of this history, did not appear to experience any benefit even from the injections of peptonate associated with very large doses of iodide, and then she got well all at once, at the very moment when this medication was suspended. This is, in a few words, the history of this young patient: Entirely well until the age of twenty-one years, she was attacked about eight months ago with an ocular affection, which rapidly assumed a certain character of gravity. To the very considerable disorder of vision was soon added photophophia, lachrymation, blepharospasm, and intense ciliary pains. Taken to several specialists, all of them recognized a parenchymatous keratitis, and prescribed iodide of potassium and cod-liver oil. We find the corneæ entirely opaque, the lids convulsively closed, the patient holds the head down constantly, seeking to avoid the impression of the light. We interrogate the mother, who informs us that, married at thirty-two years of age, her husband, a little while after his marriage, had inoculated her with syphilis. During eight years, in spite of a prolonged treatment, she had serious disease of the mouth and a perforation of the vault of the palate. During this time she had three successive pregnancies, followed by three abortions. Finally, after having been thus constantly troubled for several years, she at length recovered her health. It was about the time of her cure that she had this young girl whom she brings to us to-day.

Since the beginning of the disease of our young client, several specialists have been consulted, all of whom have prescribed iodide of potassium in the quantity of two grammes a day, cod-liver oil, bark, etc. In spite of this treatment, no improvement has been accomplished. We carry the dose of iodide to four grammes a day. At the end of a month, no improvement having taken place, we tried the injections of peptonate in the quantity of five milligrammes. They were very well borne, but we made twenty injections (one every other day) without any *appreciable result.*

We let the patient rest for ten days; then we resumed the injections in the quantity of only three milligrammes a day. We performed twenty more without obtaining any benefit. At this time, the patient falling off visibly and losing appetite, we suspended all medication. Two days after this second and sudden interruption, the eyes opened freely and spontaneously, and in the space of three or four days the corneæ cleared up visibly, and the cure was confirmed.

To resume, we will say, then, that, in the majority of ocular affections considered until now as scrofulous, there is always an advantage, as soon as the disease assumes a certain character of gravity and of tenacity, in associating the iodide of potassium in very large doses, though relatively proportioned to the age of the subject, with the other anti-scrofulous preparations, cod-liver oil, syrup of iodide of iron, cinchona, gentian, etc. If these large doses of the iodide do not seem to act favorably, one may add thereto concurrently the bichloride of mercury, either under the form of subcutaneous injections of peptonate, or of the liquor of Van Swieten, associated with the iodide of potassium, in adhering to the formula and to the mode of administration which we have given in the first case. As has been seen in the third case, even these medicines thus combined do not *always* give immediately satisfactory results. This is precisely the character of the *tardy* disorders of syphilis, whether it be acquired or hereditary, to no longer be subject to the common law, and to comport itself no longer in the same manner in all patients under the influenee of the same methods of treatment. It would seem that, from its long sojourn in the economy, this diathesis becomes subject to the influence of the transformations which age or other morbid states necessarily impress upon the organism of each one.

There is one point upon which I desire to insist still: it is the immediate improvement which often takes place at the very moment when the treatment is suspended. The suspension ought to be sudden and not gradual. A patient has taken four to five grammes of iodide of potassium for two or three months concurrently; he is subjected to injections of peptonate or to preparations of the sublimate. As long as he is subjected to this energetic medication, no apparent modification seems to be produced in his condition. All treatment is stopped, and immediately his disease is seen to be suddenly transformed and to assume a better aspect. On the other hand, this same treatment, which was well borne at a given time, if it is resumed or continued unseasonably, seems to aggravate the disease and even to provoke a relapse. These facts have already struck me several times, and it is well to mention them, for, if they were misunderstood, they might lead to therapeutic errors. Thus, for example, if a patient, being subjected for a long time to the iodide of potassium in large doses, this medicine should be suppressed and another given, the fact alone of the suppression of the iodide might produce an amelioration which one is tempted to attribute to the last remedy prescribed. There is, finally, always in the evolution of these lesions an important factor which ought never to be neglected, and which seems to play a considerable role in tardy hereditary syphilis. It is the factor time. Some disorders localized upon certain regions of the economy persist there for years without allowing themselves scarcely to be modified by the most varied modes of treatment.

We know that, conformably to this general law, benign parenchymatous keratitis, treated wih iodide of potassium in small doses, cod-liver oil, etc., persists for whole years without undergoing scarcely any modification, and then little by little, without any change having been made in the treatment, disappears slowly, never to return.

## SELECTIONS.

THE BACILLUS OF SYPHILIS.* By DR. SIGMUND LUSTGARTEN, First Assistant to Professor Kaposi in the Dermatological wards of the Vienna General Hospital. Translated by Dr. J. N. Bloom, B.A., M.D.

Since Hallier's time, a period of almost twenty-five years, the virus of syphilis has been the subject of frequent communication and of almost constant discussion; but, nevertheless, the conviction is universal that none of these researches have even partially solved the question, because of their countless contradictions, inefficient methods, and errors that are easily recognized. And further, as my effort is not the continuation of any preceding one, I will not tax your time and patience by a review of the literature of the subject, but will at once detail my own observations, referring for the literature and development of the subject to a publication of mine shortly to appear.

My researches with syphilitic products have led to the discovery of micro-organisms which until now were unknown, which are constant in their appearance, and which are thoroughly characteristic. They approach nearest in their morphological appearance and staining reaction to the bacilli of leprosy and tuberculosis, and, like these, are to be found in granulomata. By means of the method about to be given they appear as straight or curved, and sometimes irregularly bent rods, which are on an average from three and a half to four and a half micro-millimetres long, and from one-fourth to three-tenths thick. With a low power they appear uniformly smooth, presenting here and there a bulbous swelling at their extremities. With a homogeneous immersion lens (one-twentieth of an inch, Reichert) their surface appears irregularly undulatory, and slightly notched, yet in a manner such as to leave no doubt as to their rod nature. Within them we recognize, at equal distances from one another, oval, colorless, bright spores, from two to four in every bacillus. I never saw the bacilli lying free, but always enclosed in cells. These cells are from a trifle larger than, to double the size of, white-corpuscles. They are round, oval, or irregularly polygonal, and sometimes show a central or eccentric oval nucleus in the shape of a light spot. The bacilli are to be found in them singly or in groups of from two to nine or more, sometimes intertwined, or, again, in irregular confusion. The cells containing bacilli occur sparingly in the midst of the infiltration, more often on the borders of the same in the apparently normal tissue immediately adjacent. I have observed them in papules embedded between the prickle cells of the rete Malpighii, and also in the initial lesion in the lumen of a large lymphatic duct. It seems to me to be beyond doubt that hey possess the power of active locomotion—migratory cells. To obtain these results I had to employ a new method. Starting with the idea that bleaching measures would be serviceable in microscopic work, as well as in the arts and trade, I succeeded, after numerous fruitless attempts, in finding what I sought in permanganate of potash and sulphurous acid. In brief, the method is as follows: Sections, which have been hardened in alcohol, are colored in a solution of gentian violet (Ehrlich-Weigert),* from twelve to twenty-four hours at the ordinary temperature, and then for two hours at a temperature of 104° F. The section, in order to be decolorized, is first washed in absolute alcohol for several minutes, and is then, by means of a glass or platinum needle, conveyed into a watch-glass containing about three cubic centimetres of a 1½ per cent. aqueous solution of permanganate of potash. In this it remains about ten seconds. As a result, a brown flocculent precipitate of the hyperoxide of manganese is formed in the fluid, and also covers the section. It is then placed in an aqueous solution of chemically pure sulphurous acid, in which it is deprived of the hyperoxide of manganese, either instantaneously or in a very short time, dependent upon the concentration of the acid; it now appears entirely rid of its coloring matter in some places, while in others it is still deeply colored. It is next washed in distilled water, and is again placed in the solution of the permanganate of potash, in which, as in the succeeding repetitions, it remains three or four seconds, and from which it is again conveyed to the sulphurous acid. When it appears colorless, which, as a rule, occurs after this procedure has been gone through three or four times, it is dehydrated in alcohol, rendered transparent in clove oil, and mounted in Canada balsam. Xylol Canada balsam is best. This method of decolorization, to which, besides those already mentioned, the bacilli of leprosy and tuberculosis do not yield, not only permits the micro-organisms of syphilis already described to be brought to view, but is a characteristic staining reaction of them. The bacilli of syphilis, leprosy, and tuberculosis are not decolorized by my method. All other bacteria are. The bacilli of syphilis, however, are differentiated from those of leprosy and tuberculosis in that the latter are not decolorized by nitric and hydrochloric acids, whereas the bacilli of syphilis are. My method failed in the examination of splenic fever, typhoid, equinia, endocarditis ulcerosa, croupous pneumonia, various secretions of wounds, the contents af acne and scabies pustules, and also in the examination of normal tissue. I wish also to mention that my attempts to prove the presence of these micro-organisms in two chancroids were futile.

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*A paper read before the Royal and Imperial Society of Physicians of Vienna, on March 27, 1885.

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* One hundred parts of a concentrated aqueous solution of aniline with eleven parts of a concentrated alcoholic solution of gentian violet.

By means of the method just given I have examined sixteen cases of syphilis, which I will simply enumerate without going into particulars. Sections of two initial lesions; a lymphatic gland; three papules and four products of the tertiary stage; and further, the secretions of three initial lesions, and of the same number of moist papules. The result was a positive one in every case. The number of bacilli found varied. In general they were not very numerous. As regards the number, the age of the infiltration, and perhaps also the length of time since infection, are of importance. Thus I found in every section of two initial lesions, and of a periosteal gumma in a new-born child, one or more groups of bacilli, and here and there quite large groups among them; whereas in other cases a series of sections had to be examined before the undoubted presence of bacilli could be confirmed. According to my experience, the proof of the presence of the bacillus in syphilitic products is of equal diagnostic importance to that of the tubercle bacillus in the sputum.

Inasmuch as I have found, as a constant factor in undoubted syphilitic products of various kinds, a special kind of bacillus which differentiates itself in form and staining reaction from all those known up to the present time, and which, therefore, is a specific bacillus, and as we believe ourselves justified as regards other infectious diseases in assuming the constant occurrence of peculiar micro-organisms to be the cause of the disease, I maintain, as regards syphilis, that it is very probable that the bacilli which I have discovered are the carriers of the syphilitic virus. In addition to this specially important result the above-mentioned researches present several other theoretically and practically important facts and deductions, which I will briefly mention. The occurrence of bacilli enclosed in lymphoid cells whose power of locomotion, according to my before-mentioned observation, is beyond dispute; further, the occurrence of bacilli in the apparently healthy tissue lying nearest the infiltration; and, finally, and most especially, their discovery in the initial lesion in a closed lymph-duct—support the theory that the poison of syphilis is conveyed from the place of infection, first by the lymphatic system, and later through it into the blood vessels. The occurrence of bacilli in the rete Malpighii is of great theoretical interest, and accords with the clinical observation that in certain cases syphilitic infiltrations need only loose their covering of horny epidermis (moist papules) to be contagious.

* * * * *

In conclusion, I venture to hope that by continuous research, particularly in the cultivation and inoculation of the bacillus which I have discovered, etiological relation between it and syphilis will be so decidedly proved that none will deny it, and that a means will thereby be attained for successfully combating one of the saddest diseases of the human race. The experiences of the last few years in the successful attenuation of the virus of splenic fever and other infectious diseases warrant the hope that this expectation is not over-sanguine.—*Lancet.*

## RESUME OF ORIGINAL ARTICLES

### IN OTHER JOURNALS.

Abscess in the Neighborhood of the Rectum and Anus.—Dr. R. R. Hunter says in the *Kansas City Medical Index* that—

All abscesses near the lower end of the rectum have certain characteristic features in common.

1. They can rarely be made to abort, going on almost inevitably to suppuration.

2. They do not heal readily, but as a rule tend to degenerate into chronic sinuses and fistulæ.

3. The pus which they discharge is offensive in odor in consequence of the diffusion of gases from the bowel.

From these reasons it can be easily understood why it is a received rule in surgical practice that these abscesses should always be opened, and opened early—even *without* waiting for *fluctuation.* It is another good rule that all incisions for this purpose should radiate from the anus as a center, thus avoiding cutting across the general course of the blood vessels, and we escape also the bad effects of contraction during the process of healing. Abscesses in this region vary in size, situation, and gravity.

Having described the intensely painful marginal abscess, he proceeds to say that where the focus of pus formation is seated farther from the verge of the anus and beyond the grip of the sphincter, the pain, even of the acutest grade of abscess (although very considerable from greater size) is not so constant and intolerable as in the first variety. There is more or less reddening of the skin, followed by central softening and accompanied by febrile reaction. Entire rest, narcotic and sedative poultices, with early and free opening, are the remedies. One of the prominent difficulties of such a case is to provide for defecation without great temporary increase of pain. It is better that this should take place daily, or every other day, than to run the risk of fecal accumulation and its consequences, which might interfere with prompt repair. This is the more common form of acute abscess, near the anus; when left to itself the relief from pain which follows its spontaneous discharge leads the patient to consider himself cured, and it is only some weeks later that, finding his clothes constantly stained with a watery, offensive discharge, he is aware that a fistula has formed.

In both this and the last variety of abscess the exciting cause is undoubtedly (in most instances) a perforating ulcer at the bottom of one of the lacunæ of the rectum, which are situated just above the external sphincter, the ulceration being provoked by the lodgment of some source of irritation derived from fæces. Hence, an explantion of the fact, that when a complete fistula follows one of these abscesses, its communication with the bowel is just above the upper limit of the external sphincter. Occasionally the starting point of the abscess is in the muscle, so that the fistula traverses the muscular mass.

When the abscess extends entirely outside the sphincter muscle, it occupies the ischio-rectal fossa, and in the loose connective tissue of this region finds room for rapid development. It is a much more grave form of rectal abscess, that which takes its origin at first deep in the ischio-rectal fossa. It is caused in some cases doubtless by ulceration and perforation of the rectal pouch; in others as a direct result of constitutional dyscrasia. The progress of these cases is often slow, insidious, and depressing, because the pus tends to travel and burrow inward toward the point of least resistance rather than toward the surface. Should the surgeon in these cases wait for evidence of fluctuation before interfering, extensive destruction of pelvic tissue may occur, and great danger to life. The diagnosis is assisted by digital rectal exploration. The indications are those of phlegmonous abscess, and the surgeon should make early and free incision with the knife through the integument, and follow the incision with his finger so as to assure a sufficient outlet for pus and other debris. This affords the only assurance of safety.

Troublesome hemorrhage from opening these abscesses rarely occurs. In cases where it does occur, pressure applied in the usual method, with a T-shaped bandage or strips of adhesive plaster, is always available. But the subsulphate of iron is much to be preferred, used either in solution or as a dry powder. This substance is *very* efficient as a hæmostatic, possessing no irritating or escharotic properties, but on the contrary being an excellent disinfectant and a salutary local stimulant. It forms a scab under which the healing process goes on without pus formation. The cavity of an abscess has been filled with the dry powder, blown in through a tube, with excellent effect.

The abscess should always be opened so freely as to render any retention of pus impossible, and this is the condition on which prompt healing and avoidance of fistula depends. Antiseptic surgery has been largely and successfully used in these cases, and with striking success by some operators, but even with the aid of antisepsis in insuring prompt repair early and free opening cannot be dispensed with.

One variety of abscess, properly mentioned here, constitutes an exception to the rule just formulated, viz., that situated in the superior pelvi-rectal space described by Richet in 1856. The same also is true of an abscess in the vertebral region when it opens near the anal margin, simulating fistula-in-ano. These are examples of abscess near the anus and rectum which cannot be opened early, simply because they cannot be reached, even if they could be diagnosticated.

## ORIGINAL ABSTRACTS.

HERNIA OF THE LUNGS INTO THE NECK.—Surgeon-Major Maurice Knox, A. M. D., reports (*British Medical Journal*) two cases of this character, one verified by post-mortem examination. Private W——, 2d East Surrey Regiment, aged twenty-two years, was admitted into the Station Hospital, Bareilly, June 30, 1884, with the following history: He had been fairly healthy up to December, 1882, when he was admitted into the hospital at Gibraltar with bronchial catarrh, and remained a hundred and forty-six days under treatment. He was subsequently twice in hospital under the head of "bronchitis." He stated that in February, 1884, while on the march, he had a violent fit of coughing, and felt something give way in the left side of the neck. The pain was rather severe at the time, but he was able after a short rest to walk into camp. On looking at himself in the glass, he observed a tumor above his left clavicle the size of a hen's egg. He continued to perform his duty up to June 30, when he presented himself at hospital complaining of slight pain in his chest, dyspnœa on exertion, and dry cough. On examining the patient's chest there was marked resonance over the left side, the whole cardiac region appeared to be covered with lung tissue, the inspiratory murmur was short and the expiratory murmur prolonged. There was a peculiar crackling râle audible over the whole of the front of the left lung, especially along the thin edge. Above the left clavicle there was a tumor about the size of a turkey's egg; it was superficially situated, soft and compressible to the feel; and on auscultation respiratory sounds were audible over it, accompanied by the same crackling râle heard below the clavicle over the left lung. When the patient coughed the tumor became more prominent; the skin over the tumor was free and quite healthy; there was no impediment to the circulation or symptom of pressure of any kind; and the only inconveniences the patient experienced were slight pain in the chest and dyspnœa on exertion. The right lung was fairly healthy. The patient remained in hospital up to December, 1884, and the only change that took place in the case was that the lung hernia increased to the size of a large orange. No treatment of any kind further than the rest was attempted. Dr. Wilkie, of the Indian Medical Service, supplied the notes of a very similar case that occurred in his own practice about the same time:— Jewra, aged fifty, a native prisoner in Bareilly Central Prison, a man who frequently suffered from attacks of asthma, was admitted into hospital on July 2, 1884, suffering from fever and general debility. He died suddenly from syncope, about half an hour after returning from the latrine, on July 8, 1884. At the *post-mortem examination* the left lung was found to be emphysematous, especially along the anterior border and at the apex. The right lung was emphysematous on the anterior border; the apex was protruded beneath the clavicle into the neck. It was dilated into a translucent tumor about the size of a man's fist, in which most of the alveolar structure of the lung had disappeared. On removing the lung the entire hand could be passed upwards beneath the clavicle from the cavity of the thorax, and the superficial structure of the neck bulged out into a tumor. In the left lung the emphysema was in a less advanced stage, and there was no protrusion upwards.

CURE OF ANEURISM OF THE ABDOMINAL AORTA BY LAPAROTOMY AND INTRODUCTION OF SILVER WIRE (*Boston Medical and Surgical Journal*). The attempt to cure an aneurism by coagulation of the blood through the introduction of foreign bodies into the sac has been tried on several occasions. Moore, in 1864, used iron wire; Levis, in 1873, horsehair, of which he introduced about twenty-five feet into an aneurismal sac; Bacelli, fine watch-springs; Schrötter, in a case lately reported, introduced into an aneurism of the thoracic aorta 126 em. of Florence silk through a canula in divided portions at two insertions. This patient died fifteen days after the second operation, of pulmonary œdema, and the autopsy showed that the sac of the aneurism, which protruded from the wall of the chest, was entirely filled with coagulated blood. The peculiarity of the case now reported by Loreta, of Bologna, consists, not only in the eminently successful result, thereby differing from previous attempts, but in the fact that the aneurism affected the abdominal aorta and necessitated a laparotomy. Details of this case and of the operation are given in the *Deutsche Medizinal Zeitung* of March 23, 1885. In view of the existing discomfort, pain, and extreme exhaustion, death was to be expected unless prompt relief could be given. Thereupon Professor Loreta concluded to perform laparotomy with the object of separating the aneurismal sac from the blood current. The walls of the aneurism were found to be so thin that it was found that a ligature applied below the sac might produce rupture; the operator therefore concluded to introduce a wire into the sac to cause coagulation of the blood. With a slender trocar he made a puncture, and carried through the canula as much fine silvered copper wire as the space in the sac allowed. The outer end of the wire was also pushed in, the whole operation lasting one hour and a quarter. Twenty days after it no trace either of pulsation or of murmur was to be found, and the sac was about the size of a nut.

NOTE.—Later reports show that the patient died quite suddenly, ninety-two days after the operation, in consequence of rupture of the aorta, at the angle of junction between the artery and anterior wall of the tumor. The sac had shrunk to the size of a walnut and was completely filled with coagula of organized fibrine, while the copper wire was found unaltered and rolled up into a globular mass in the sac.

GRADUAL REPOSITION OF AN INVERTED UTERUS BY A NEW CONTRIVANCE.—Dr. James R. Chadwick (*Boston Medical and Surgical Journal*), on June 1, 1884, admitted to his private hospital a patient with an inverted uterus, who had been delivered of her first child by forceps after a tedious labor in September, 1883. There had been excessive hemorrhage in childbed, and the uterus was said "to have come down" at that time. Twice, at intervals of several months, she had had severe flooding, by which she had been considerably but not dangerously reduced. She brought a letter from Dr. John L. Sullivan, stating that she had recently come under his care, and that he had tried unsuccessfully for two hours to reduce the inverted uterus, with the patient under ether. The uterus was of normal size, and inverted nearly up to the external os, which could be felt firmly encircling the inverted cervix. A few days later the patient was etherized by Dr. F. H. Lombard, when he made an attempt, with the assistance of Dr. G. H. Lyman and Dr. C. M. Green, to reduce the inversion with various instruments for applying upward pressure upon the fundus, moulding the organ with his finger in the intervals, but not being able, owing to the smallness of the vagina and rigidity of the perinæum, to introduce my whole hand into the vagina. When the organ was drawn partially out of the vulva, he could push a finger in the rectum into the cavity made on the peritoneal side by the inverted organ, and even tried to dilate the rigid conical constriction in that way (Courty's method), but was deterred from exerting sufficient force by the fear of tearing the peritonæum. After two hours of effort without apparent gain the congested appearance of the uterine body and the feebleness of the patient led me to abstain. A considerable rent in the perinæum was closed by two sutures. A fortnight later he sought to exert steady, moderate pressure upon the fundus in the direction of the vaginal axis by inserting into the vagina two, and, finally, three superimposed inflated rubber rings (doughnut pessaries) of three successive sizes, the smallest being at the top and partially encircling the fundus, the largest resting upon the perinæum; this worked well when first adjusted, but became speedily disarranged and inefficient. He has satisfied himself, however, that the largest ring was well retained by the perinæum, and made a good basis for the erection of a superstructure with which to push up the fundus. The ring was reinserted, and through its central aperture was passed a spherical-rubber pessary collapsed; the latter was then inflated by means of the rubber-tube attachment, which, passing through the opening in the ring, hung out of the vagina. The patient experienced some slight pain during the following night, requiring for its relief but an eighth of a grain of morphine. The pain ceased suddenly about thirty hours after the instruments were arranged, and the next morning he found that reposition had been accomplished. The os was still very patulous and remained so for several days, but the uterus was complete retroflexion. It was replaced by means of the repositor, and the cervix kept well back by means of a wool tampon; the organ, notwithstanding, retroflexed again, owing to the extreme laxity of its tissues. This displacement recurred again and again in spite of every vaginal pessary that Dr. Chadwick could fit, until he prevented the flexion by means of his light intra-uterine stem in addition to an Albert H. Smith pessary, wearing which she returned to her home in good health on the fourteenth day after reposition. This probable consequence of reposition, he thinks, should be borne in mind, especially as no writer on the subject, so far as he knows, gives any data of the condition subsequent to reposition.

DEATHS FROM ANÆSTHESIA IN 1884 IN GREAT BRITAIN.—Dr E. H. Jacob gives in the *British Medical Journal* a tabular statement of all the deaths occurring during anæsthesia for surgical purposes which he has been able to collect. From chloroform there were 9; from mixtures of chloroform and ether, 2; from methylene, 3; and from ether, 6. In reviewing the cases of death from chloroform and ether respectively, he says, one is struck by the difference in the character of the operations; the deaths from chloroform being mostly in comparatively healthy persons, during slight operations. The deaths from ether occurred, without exception, in persons severely debilitated by disease.

COMBINED RECTAL AND INTRA-UTERINE IRRIGATOR.—Dr. J. S. Colman, of Augusta, Ga., calls attention in the *British Medical Journal* to a modification of the "metro-cyst" presented by him to the medical profession in 1879, which makes it available for the diseases of the rectum and surrounding pelvic structures. It is of hard rubber, and consists of a cylindrical frame or cage traversed by a central tube. This arrangement insures the easy exit of the injected fluid. Any ordinary syringe can, by means of rubber tubing, be attached to it. He says: "My preference in the use of hot water is for the siphon. Thanks to Dr. Emmet, we all now appreciate the indispensable use of hot water in inflammation and as a hæmostatic. Though I have not yet had an opportunity of testing the merits of this instrument in ovaritis, pelvic cellulitis, or peritonitis, I feel confident that we will find it one of our most efficient measures in combating these serious and obstinate forms of disease. So far as I am informed, Dr. J. R. Chadwick was the first to advocate the rectal use of hot water in the treatment of pelvic inflammations (*vide* his able and interesting paper in the *Transactions* of the American Gynæcological Society for 1880). To me it promises much in acute prostatitis, inflammation of the rectum, and internal hæmorrhoidal troubles. I have had most gratifying success from its use in a case of puerperal endometritis, and in one of rectal ulcers."

AN AMERICAN OPINION IN REGARD TO OVARIOTOMY IN ENGLAND.—In the *Atlanta Medical and Surgical Journal*, says the *British Medical Journal* of May 2, the distinguished Dr. Robert Battey devotes an article to the progress of ovariotomy, in which he observes that the extraordinary results which have been obtained in Great Britain within the past three years, seventy-three consecutive operations in the hands of one surgeon, and seventy-six in the hands of another, without a death, are well calculated to excite both astonishment and admiration. American results being far less satisfactory, Dr. Battey enters into a consideration of the conditions of this success. Experience he considers to be the first of these conditions. If the best results are to be obtained in America, ovariotomy must, he believes, be put into the hands of a few, and the general practitioner must forego the ambition of swinging here and there an occasional scalp to his girdle. The second condition is "clean hands and appliances;" the third, a clean apartment and bedding. The fourth is "pure atmosphere and free ventilation." The fifth condition is thorough cleansing of the abdomen. Dr. Battey agrees with those English, Scotch, and Irish operators who employ the drainage-tube when the "toilet of the peritoneum" is from any cause incomplete. The sixth condition is skilled nursing and quietude; the seventh, early operation; the eighth, complete intra-peritoneal ligature of the pedicle. The last condition of success is antiseptic solutions and spray. He admits that "the results obtained by Dr. Bantock, in London, and Mr. Lawson Tait, in Birmingham, seem to show conclusively that the use of these solutions is not indispensable to the attainment of the best success. They have both shown by their work that scrupulous attention given to the cleansing of hands, instruments, and sponges, not only prior to the operating, but frequently during the progress of the operation, is sufficient. The frequent removal of the blood from hands and implements appears to protect the abdomen from septic influence." Dr. Battey then speaks of Dr. Keith's objections to the spray. Nevertheless, Dr. Battey himself is not inclined to give up complete antiseptic precautions. He has never had a case of carbolic acid poisoning, and concludes by observing: "To the criticism that carbolic solutions weaker than one to twenty have been shown in the laboratory to be impotent for the destruction of bacteria, I answer that I am seeking by its use only the restoration of my patients to health, and the mortality in my hands since its use has dropped from twenty-five per cent. to zero. This, for me, is sufficient reason for the continuance of the method, and for the rejection of all other substitutes, until such time as more complete demonstration shall place a clearer light before me."

Easy Method of Reducing a Prolapsed Funis.—Dr. Daniel E. McSweeny, of this city, in a communication to the *Medical and Surgical Reporter*, describes his method as follows: "Introducing the index finger into the most distal loop of the escaped portion, and slowly twisting the cord upon itself, you will in a very short period of time bring the object into a shape which can be readily seized by the fingers and replaced above the brim of the pelvis, meantime keeping the hand in vagina until head of child engages and prevents any further prolapse. The tendency of said cord (like india rubber tubing so treated) is to immediately unwind." A case related by the doctor well illustrates his method and its success.

## HOSPITAL NOTES.

A Summary of Two Hundred and Fifty-two Cases of Lobar Pneumonia.—Being the cases treated in the New York Hospital from April, 1877, to January, 1885. Compiled by Edwin T. Doubleday, M.D., Medical Clinical Registrar to the New York Hospital.—The ages of the patients and the occurrence of the cases will be found to closely agree with the results of other statistics. It is noticeable that a history of infection was not obtained in any of the cases. The death-rate is considerably higher than that given by most observers, 112 out of the 252 patients having died.

*Sex.*—Males, 201; females, 51.

| Age. | M. | F. |
|---|---|---|
| 5 to 10 years | .. | 2 |
| 10 to 20 years | 17 | 4 |
| 20 to 30 years | 70 | 18 |
| 30 to 40 years | 47 | 13 |
| 40 to 50 years | 36 | 5 |
| 50 to 60 years | 13 | 5 |
| 60 to 70 years | 12 | 4 |
| 70 to 80 years | 1 | 1 |

*Exciting Cause.*—No assignable cause in 199 cases; exposure to wet and cold in 47 cases; immersion in 3 cases; prolonged mental labor and loss of sleep in 3 cases.

*Alcoholic History.*—There was an acknowledged alcoholic history in almost fifty per cent. of all cases, and where the history was marked the death-rate was sixty-eight per cent. The results of the alcoholic habit are one of the prime factors in the mortality of pneumonia.

*Chill.*—Not stated in 15 cases; absent in 58 cases; present in 179 cases.

*Pain.*—Not stated in 18 cases; absent in 19 cases; present in 215 cases. In about twenty-five per cent. of the cases, pain came on eighteen to thirty-six hours after the chill. In four cases pain preceded the chill. In seven cases both chill and pain were absent.

*Crisis.*—A distinct and well-marked crisis occurred in 38 cases. Average time of crisis, 8.5 days. Crisis occurred most frequently on the following days: Sixth day, 6 cases; seventh day, 6 cases; eighth day, 6 cases; eleventh day, 5 cases; twelfth day, 5 cases; ninth day, 3 cases. Per cent. in which crisis occurred: Of all cases, 11.1 per cent.; of uncomplicated cases, 27.1 per cent.; of cases complicated with pleurisy, 13.7 per cent.; of cases with other complications, 2.6 per cent. Complications where crisis occurred were as follows: Chronic diffuse nephritis, one case; mitral cardiac disease, one case; empyema, one case.

*Temperature.*—The temperature of those who recovered was 100° to 104.5°. Few recovered where the temperature ran up over 105°; though one recovered after the temperature had staid at 106.1° for two hours. Ante-mortem rises of temperature generally occurred, commencing one to eighteen hours before death. In ten cases it rose to + 106°, in three cases to + 107°, in three cases to + 108°, and in one case to 100.6°. Depressed temperature occurred in three cases, all alcoholic with chronic diffuse nephritis. They were as follows: Male, aged sixty-seven, 98.4°; male, aged sixty-six, 95.6°; male, aged forty, 92.4°.

*Duration of Fever.*

| | Recoveries. | Deaths. |
|---|---|---|
| In all cases, - - - - - - - - - - - - - | 12.5 days. | 9.2 days. |
| In uncomplicated cases - - - - - - - - - - | 10.3 " | 7.5 " |
| In cases complicated with pleurisy - - - - | 8.6 " | 7.3 " |

*Treatment.*—Aconite has been used in a few cases. Quinine has been used extensively. When given early it was apparently of marked benefit in giving a mild form to the pneumonia and in a very few cases cutting short the disease. When given late, in large doses (gr. xv. to gr. xxx), for reducing temperature, it has had, in some cases, a marked depressant action on the heart. When the case came in before consolidation had taken place, a dose of calomel (gr. v. to gr. x.) was frequently given. I have seen typical physical signs of the stage of congestion (crepitant râle, etc.) in two cases disappear under this treatment. For the delirium, the bromides, chloral, and morphia, very sparingly have been used. For pain, opium, generally in the form of liquid Dover's powder. For dyspnœa, small doses of atropia, quebracho, dry cups, and when the consolidation is extensive (double pneumonias), inhalations of oxygen (ciii. to cv. p. r. n). For stimulants and heart-failure, ammonium carbonate (gr. v. q. 3 h.), fresh tr. digitalis (gtt. v. to gtt. xx. q. 3 h.), and alcohol. Patients are generally put on stimulant treatment as soon as admitted, and the alcohol is rapidly increased as long as the pulse remains poor and the tongue dry, or until the breath becomes alcoholic. Whiskey is the form of alcohol used. The amount of alcohol needed varies much. Some cases required twelve to eighteen ounces in the twenty-four hours. Lately antipyrine has been used for high temperature. It was given in powder gr. xxx.; and, at the end of an hour, gr. xv.; if required, gr. xv. were given at the end of the third hour. It sometimes caused slight sweating and slight cardiac depression. It gave rise to no gastric disturbances. Temperature fell one to three degrees and staid down one to eight hours. The antipyrine was used in twelve cases.

*Previous Attacks of Pneumonia.*—In eleven cases there was a well-marked history of a previous pneumonia. In one case there was a history of two previous attacks.

*Death.*—The days on which patients died most frequently were as follows: eighth day, seventeen cases; sixth day, 13 cases; fifth day, 12 cases; ninth day, 10 cases; fourth, seventh, and tenth days, 9 cases each.—*N. Y. Med. Record.*

# SANITARY DEPARTMENT.

## DISINFECTION AND DISINFECTANTS. PRELIMINARY REPORT PREPARED AT THE REQUEST OF THE SANITARY COUNCIL OF THE MISSISSIPPI VALLEY, BY THE COMMITTEE OF DISINFECTANTS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION. George M. Sternberg, M.D., U. S. A., Chairman.

The object of *disinfection* is to prevent the extension of infectious diseases by destroying the specific infectious material which gives rise to them. This is accomplished by the use of disinfectants. There can be no partial disinfection of such material; either its infecting power is destroyed or it is not. In the latter case there is a failure to disinfect. Nor can there be any disinfection in the absence of infectious material. It has been proved for several kinds of infectious material that its specific infecting power is due to the presence of living micro-organisms, known in a general way as "disease germs;" and practical sanitation is now based upon the belief that the infecting agents in all kinds of infectious material are of this nature. Disinfection, therefore, consists essentially in the destruction of disease germs. Popularly the term disinfection is used in a much broader sense. Any chemical agent which destroys or masks bad odors, or which arrests putrefactive decomposition, is spoken of as a disinfectant. And in the absence of any infectious disease it is common to speak of disinfecting a foul cess-pool, or bad-smelling stable, or privy vault. This popular use of the term has led to much misapprehension, and the agents which have been found to destroy bad odors—*deodorizers*—or to arrest putrefactive decomposition—*antiseptics*—have been confidently recommended and extensively used for the destruction of disease germs in the excreta of patients with cholera, typhoid fever, etc. The injurious consequences which are likely to result from such misapprehension and misuse of the word disinfectant will be appreciated when it is known that:

*Recent researches have demonstrated that many of the agents which have* *been found useful as deodorizers, or as anteseptics, are entirely without value for the destruction of disease germs.* This is true, for example, as regards the sulphate of iron or copperas, a salt which has been extensively used with the idea that it is a valuable disinfectant. As a matter of fact, sulphate of iron in saturated solution does not destroy the vitality of disease germs or the infecting power of material containing them. This salt is, nevertheless, a very valuable antiseptic, and its low price makes it one of the most available agents for the arrest of putrefactive decomposition in privy vaults, etc.

*Antiseptic agents also exercise a restraining influence upon the development of disease germs, and their use during epidemics is to be recommended, when masses of organic material in the vicinity of human habitations can not be completely destroyed, or removed, or disinfected.* While an antiseptic agent is not necessarily a disinfectant, all disinfectants are antiseptics ; for putrefactive decomposition is due to the development of " germs " of the same class as that to which disease germs belong, and the agents which destroy the latter also destroy the bacteria of putrefaction, when brought in contact with them in sufficient quantity, or restrain their development when present in smaller amounts.

*A large number of the proprietary " disinfectants," so called, which are in the market, are simply deodorizers or antiseptics, of greater or less value, and are entirely untrustworthy for disinfecting purposes.* Antiseptics are to be used at all times when it is impracticable to remove filth from the vicinity of human habitations, but they are a poor substitute for cleanliness. During the prevalence of epidemic diseases, such as yellow fever, typhoid fever and cholera, it is better to use, in privy-vaults, cess-pools, etc., those antiseptics which are also disinfectants—i. e., germicides; and when the contents of such receptacles are known to be infected this becomes imperative. Still more important is the destruction at our sea-port quarantine stations of infectious material which has its origin outside of the boundaries of the United States, and the destruction, within our boundaries, of infectious material given off from the persons of those attacked with any infectious disease, whether imported or of indigenous origin.

*In the sick-room we have disease germs at an advantage, for we know where to find them as well as how to kill them.* Having this knowledge, not to apply it would be criminal negligence, for our efforts to restrict the extension of infectious diseases must depend largely upon the proper use of disinfectants in the sick room.

## GENERAL DIRECTIONS.

*Disinfection of Excreta, etc.*—The infectious character of the dejections of patients suffering from cholera and from typhoid fever is well established; and this is true of mild cases and of the earliest stages of these diseases as well as of severe and fatal cases. It is probable that epidemic dysentery, tuberculosis, and perhaps diphtheria, yellow fever, scarlet fever, and typhus fever, may also be transmitted by means of the alvine discharges of the sick. It is therefore of the first importance that these should be disinfected. In cholera, diphtheria, yellow fever and scarlet fever, all vomited material should also be looked upon as infectious. And in tuberculosis, diphtheria, scarlet fever and infectious pneumonia, the sputa of the sick should be disinfected or destroyed by fire. It seems advisable also to treat the urine of patients sick with an infectious disease with one of the disinfecting solutions below recommended.

*Chloride of lime*, or bleaching powder, is, perhaps, entitled to the first place for disinfecting excreta, on account of the rapidity of its action. The following standard solution is recommended:

*Standard Solution No* 1.—*Dissolve Chloride of Lime of the best quality* in soft water, in the proportion of four ounces to the gallon.* Use one pint of this solution for the disinfection of each discharge in cholera, typhoid fever, etc. Mix well and leave in vessel for at least ten minutes before throwing into privy-vault or water closet. The same directions apply for the disinfection of vomited matters. Infected sputum should be discharged directly into a cup half full of the solution.

*Standard Solution No.* 2.—*Dissolve Corrosive Sublimate and Permanganate of Potash in soft water, in the proportion of two drachms of each salt to the gallon.* This is to be used for the same purposes and in the same way as *Standard Solution No.* 1. It is equally effective, but it is necessary to leave it for a longer time in contact with the material to be disinfected—at least an hour. The only advantage which this solution has over the chloride of lime solution consists in the fact that it is odorless, while the odor of chlorine in the sick room is considered by some persons objectionable. The cost is about the same.† It must be remembered that this solution is highly poisonous. It is proper, also, to call attention to the fact that *it will injure lead pipes if passed through them in considerable quantities.*

*Standard Solution No.* 3.—*To one part of Labarraque's Solution* (*liquor sodæ chlorinatæ*) *add five parts of soft water.* This solution is more expensive‡ than the solution of chloride of lime, and has no special advantages for the purposes mentioned. It may, however, be used in the same manner as recommended for *Standard Solution No.* 1.

The following powder is also recommended for the disinfection of excreta in the sick room and of privy-vaults, etc.:

*Disinfecting and Antiseptic Powder.—One pound of Chloride of lime; one ounce of Corrosive Sublimate; nine pounds of Plaster of Paris. Pulverize the Corrosive Sublimate and mix thoroughly with the Plaster of Paris. Then add the Chloride of Lime and mix well. Pack in paste-board boxes or in wooden casks. Keep dry.* As an antiseptic and deodorizer this powder is to be sprinkled upon the surface of excreta, etc.

To disinfect excreta in the sick room, cover the entire surface with a thin layer of the powder—one-fourth inch in thickness—and if the material is not liquid pour on sufficient water to cover it.

*Disinfection of the Person.*—The surface of the body of a sick person, or of his attendants, when soiled with infectious discharges, should be at once cleansed with a suitable disinfecting agent. For this purpose *Standard Solution No.* 3 may be used. In diseases like small-pox and scarlet fever, in which the infectious agent is given off from the entire surface of the body, occasional ablutions with Labarraque's Solution, diluted with twenty parts of water, will be more suitable than the stronger solution above recommended. In all infectious diseases the surface of the body of the dead should be thoroughly washed with one of the standard solutions above recommended, and then enveloped in a sheet saturated with the same.

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* NOTE.—Good chloride of lime should contain at least 25 per cent. of available chlorine. It may be purchased by the quantity at 5 cents per pound. The cost of the standard solution recommended is therefore less than two cents a gallon. A clear solution may be obtained by filtration or by decantation, but the insoluble sediment does no harm, and this is an unnecessary refinement.

† Corrosive sublimate costs about 70 cents a pound, and permanganate of potash 65 cents a pound, by the single pound. This makes the cost of *Standard Solution No.* 2 a little more than two cents a gallon.

‡ We assume that the solution used will contain at least 3 per cent. of available chlorine, which would give us 0.5 per cent. in the diluted solution. The cost per gallon of the undiluted solution should not be more than fifty cents by the quantity. This would make our standard solution cost between eight and nine cents a gallon.

*Disinfection of Clothing.*—Boiling for half an hour will destroy the vitality of all known disease germs, and there is no better way of disinfecting clothing or bedding which can be washed than to put it through the ordinary operations of the laundry. No delay should occur, however, between the time of removing soiled clothing from the person or bed of the sick and its immersion in boiling water, or in one of the following solutions; and no article should be permitted to leave the infected room until so treated.

*Standard Solution No.* 4.—*Dissolve Corrosive Sublimate in water* in the proportion of four ounces to the gallon, and add one drachm of Permanganate of Potash to each gallon to give color to the solution.* One fluid ounce of this standard solution to the gallon of water will make a suitable solution for the disinfection of clothing. The articles to be disinfected must be thoroughly soaked with the disinfecting solution and left in it for at least two hours, after which they may be wrung out and sent to the wash. N.B. *Solutions of corrosive sublimate should not be placed in metal receptacles,* for the salt is decomposed and the mercury precipitated by contact with copper, lead, or tin. A wooden tub or earthen crock is a suitable receptacle for such solutions. Clothing may also be disinfected by immersion for two hours in a solution made by diluting *Standard Solution No.* 1 with nine parts of water—one gallon in ten. This solution is preferable for general use, especially during the prevalence of epidemics, on account of the possibility of accidents from the poisonous nature of *Standard Solution No.* 4. When diluted as directed, this solution may, however, be used without danger from poisoning through the medium of clothing immersed in it, or by absorption through the hands in washing. A poisonous dose could scarcely be swallowed by mistake, owing to the metallic taste of the solution, and the considerable quantity which would be required to produce a fatal effect—at least half a pint. Clothing and bedding which cannot be washed may be disinfected by exposure to dry heat in a properly constructed disinfecting chamber for three or four hours. A temperature of 230 deg. Fah. should be maintained during this time, and the clothing must be freely exposed—*i.e.*, not folded or arranged in piles or bundles, for the penetrating power of dry heat is very slight. The limitations with reference to the use of dry heat as a disinfectant are stated in a "Preliminary Report of the Committee on Disinfectants," published in the *Medical News*, Philadelphia, March 14, 1885. The temperature above mentioned will not destroy the *spores* of bacilli—e.g., of the anthrax bacillus, but is effective for the destruction of all disease germs which do not form spores; and there is good reason to believe that this list includes small-pox, cholera, yellow fever, diphtheria, erysipelas, puerperal fever, and scarlet fever (?) Moist heat is far more effective, and it is demonstrated that ten minutes exposure to steam, at a temperature of 230 deg. Fah., will destroy all known disease germs, including the most refractory spores. In the absence of a suitable disinfecting chamber, it will be necessary to burn infected clothing and bedding, the value of which would be destroyed by immersion in boiling water, or in one of the disinfecting solutions recommended. *Disinfection of the sick room.*—In the sick room no disinfectant can take the place of free ventilation and cleanliness. It is an axiom in sanitary science that *it is impracticable to disinfect an occupied apartment*, for the reason that disease germs are not destroyed by the presence in the atmosphere of any known disinfectant in respirable quantity. Bad odors may be neutralized, but this does not constitute disinfection in the sense in which the term is here used. These bad odors are, for the most part, an indication of want of cleanliness, or of proper ventilation; and it is better to turn contaminated air out of the window or up the chimney than to attempt to purify it by the use of volatile chemical agents, such as carbolic acid, chlorine, etc., which are all more or less offensive to the sick, and are useless so far as disinfection—properly so-called—is concerned.

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*Mercuric chloride (corrosive sublimate) is soluble in cold water in the proportion of one part in sixteen. Solution is greatly facilitated by heat.

*When an apartment which has been occupied by a person sick with an infectious disease is vacated, it should be disinfected.* But it is hardly worth while to attempt to disinfect the atmosphere of such an apartment, for this will escape through an open window and be replaced by fresh air from without, while preparations are being made to disinfect it. Moreover, experience shows that the infecting power of such an atmosphere is quickly lost by dilution or by the destruction of floating disease germs through contact with oxygen, and that even small-pox and scarlet fever are not transmitted to any great distance through the atmosphere, while cholera, typhoid fever and yellow fever are rarely, if ever, contracted by contact with the sick, or by respiring the atmosphere of the apartments occupied by them. The object of disinfection in the sick room is, mainly, the destruction of infectious material attached to surfaces, or deposited as dust upon window-ledges, in crevices, etc. If the room has been properly cleansed and ventilated while still occupied by the sick person, and especially if it was stripped of carpets and unnecessary furniture at the outset of his attack, the difficulties of disinfection will be greatly reduced. All surfaces should be thoroughly washed with a solution of corrosive sublimate of the strength of one part in 1,000 parts of water, which may be conveniently made by adding four ounces of *Standard solution No.* 4 to the gallon, or one pint to four gallons of water. The walls and ceiling, if plastered, should be brushed over with this solution, after which they may be whitewashed with a lime wash. Especial care must be taken to wash away all dust from window-ledges and other places where it may have settled, and to thoroughly cleanse crevices and out-of-the-way places. After this application of the disinfecting solution and an interval of twenty-four hours or longer for free ventilation, the floors and wood-work should be well scrubbed with soap and hot water, and this should be followed by a second more prolonged exposure to fresh air, admitted through open doors and windows. Many sanitary authorities consider it necessary to insist upon fumigation with sulphurous acid gas—produced by combustion of sulphur—for the disinfection of the sick room. As an additional precaution this is to be recommended, especially for rooms which have been occupied by patients with small-pox, scarlet fever, diphtheria, typhus fever, and yellow fever. It should precede the washing of surfaces and free ventilation above recommended. But fumigation with sulphurous acid gas alone, as commonly practiced, cannot be relied upon for the disinfection of the sick room and its contents, including bedding, furniture, infected clothing, etc., as is popularly believed. And a misplaced confidence in this mode of disinfection is likely to lead to a neglect of the more important measures which have been recommended. In the absence of moisture the disinfecting power of sulphurous acid gas is very limited, and under no circumstances can it be relied upon for the destruction of spores.* But exposure to this agent in sufficient quantity, and for a considerable time, especially in the presence of moisture, is destructive of disease germs, in the absence of spores. It is essential, however, that the germs to be destroyed shall be very freely exposed to the disinfecting agent, which has but slight penetrating power. *To secure any results of value it will be necessary to close the apartment to be disinfected as completely as possible by stopping all apertures through which the gas might escape, and to burn not less than three pounds of sulphur for each thousand cubic feet of air-space in the room.** To secure complete combustion of the sulphur it should be placed in powder or in small fragments in a shallow iron pan, which should be set upon a couple of bricks in a tub partially filled with water, to guard against fire. The sulphur should be thoroughly moistened with alcohol before igniting it.

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* See Preliminary report of Committee on Disinfectants in *The Medical News* of March 28, 1885.

*Disinfection of privy-vaults, cess-pools, etc.*—When the excreta—not previously disinfected—of patients with cholera or typhoid fever have been thrown into a privy-vault that is infected, disinfection should be resorted to as soon as the fact is discovered, or whenever there is reasonable suspicion that such is the case. It will be advisable to take the same precautions with reference to privy-vaults into which the excreta of yellow-fever patients have been thrown, although we do not definitely know that it is infectious material. Disinfection may be accomplished either with corrosive sublimate or with chloride of lime. The amount used must be proportioned to the amount of material to be disinfected. *Use one pound of corrosive sublimate for every five hundred pounds*—estimated—*of fecal matter contained in the vault, or one pound of chloride of lime to every thirty pounds. Standard Solution No.* 4, diluted with three parts of water, may be used. It should be applied—the diluted solution—in the proportion of one gallon to every four gallons—estimated—of the contents of the vault. If chloride of lime is to be used, one gallon of *Standard Solution No* 1 will be required for every gallon—estimated—of the material to be disinfected. All exposed portions of the vault, and the wood-work above it, should be thoroughly washed down with the disinfecting solution. To keep a privy-vault disinfected during the progress of an epidemic, sprinkle chloride of lime freely over the surface of its contents daily. Or, if the odor of chlorine is objectionable, apply daily four or five gallons of *Standard Solution No.* 2, which should be made up by the barrel, and kept in a convenient location for this purpose.

*Disinfection of ingesta.*—It is well established that cholera and typhoid fever are very frequently, and perhaps usually, transmitted through the medium of infected water or articles of food, and especially milk. Fortunately we have a simple means at hand for disinfecting such infected fluids. This consists in the application of heat. *The boiling temperature maintained for half an hour kills all known disease germs.* So far as the germs of cholera, yellow fever, and diphtheria are concerned, there is good reason to believe that a temperature considerably below the boiling point of water will destroy them. But in order to keep on the safe side, it is best not to trust anything short of the boiling point (212° F.), when the object in view is to disinfect food or drink which is open to the suspicion of containing the germs of any infectious disease. During the prevalence of an epidemic of cholera it is well to boil all water for drinking purposes. After boiling, the water may be filtered, if necessary, to remove sediment, and then cooled with *pure* ice if desired. A sheet of filtering paper, such as druggists use, and a glass or tin funnel furnishes the best means

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† One litre of sulphur dioxide weighs 2.9 grammes. To obtain ten litres of gas it is necessary to burn completely fifteen grammes of "flowers of sulphur" (Vallin).

for filtering water on a small scale for drinking purposes. A fresh sheet of paper is to be used daily.

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# PHARMACY AND THERAPEUTICS.

## A COMPARISON OF WEIGHTS, ETC., PREPARED BY REQUEST FOR CONVENIENCE OF READERS.

### FRENCH WEIGHTS IN TROY WEIGHTS.

| | | | |
|---|---|---|---|
| 1 milligramme | equal to | 1-65th | grain. |
| 1 centigramme | " | 1-6th | " |
| 1 decigramme | " | 1½ | grains. |
| 1 gramme | " | 15 | " |
| 1 decagramme | " | 150 | " |
| 1 hectogramme | " | 1,465 | " |
| 1 kilogramme | " | 14,720 | " |
| 1 myriagramme | " | 145,824 | " |

### FRENCH MEASURES OF LENGTH IN ENGLISH MEASURES OF LENGTH.

| | | | |
|---|---|---|---|
| 1 millimetre | equal to | 1-1,000th | metre. |
| 1 centimetre | " | 1-100th | " |
| 1 decimetre | " | 1-10th | " |
| 1 metre | " | 39 37-100th | inches. |
| 1 decametre | " | 10 | metres. |
| 1 hectometre | " | 100 | " |
| 1 kilometre | " | 1,000 | " |
| 1 myriametre | " | 10,000 | " |

### FRENCH MEASURES OF CAPACITY IN ENGLISH MEASURES OF CAPACITY.

| | | | | |
|---|---|---|---|---|
| 1 millitre | equal to | 15 | troy grains | water. |
| 1 centilitre | " | 150 | " | " |
| 1 decilitre | " | 1,500 | " | " |
| 1 litre | " | (1 qt.) 15,000 | " | " |
| 1 decalitre | " | 150,000 | " | " |
| 1 hectolitre | " | 1,150,000 | " | " |

NOTE.—1 grain troy is equal to 1 and 8-100th grains in apothecary's weight.

### TEMPERATURE AND WEIGHT.

| | | |
|---|---|---|
| 1 lb. water at 60 deg. F. | equal to | 75-100th pint, or 6,067 22-100ths minims. |
| 1 oz. " " | equal to | 1 5-100ths fl. oz., or 505 60-100ths minims. |
| 1 gr. " " | equal to | 1 5-100ths minims. |
| 1 fl. drachm water at 60 deg. F. | | 56 96-100ths grains. |
| 1 fl. oz. " " | | 455 09-100ths " |
| 1 fl. gallon " " | | 231 cubic inches. |
| 1 fl. pint " " | | 28 87-100 " |

### TEMPERATURES.

CENTIGRADE.—To convert Centigrade (C.) or Celsius to Fahrenheit—multiply by 9, divide by 5, and add 32. Thus: 40 deg. C. multiplied by 9 equal 360 deg.: divide by 5, equal 72 deg.: add 32, equal 104 deg. F.

REAUMUR.—To convert Reaumur (R.) to Fahrenheit—multiply by 9, divide by 4, and add 32. Thus: 40 deg. R. multiplied by 9 equal 360 deg.; divide by 4, equal 90; add 32, equal 112 deg. F.

### PERCENTAGE OF ALCOHOL IN WINES, LIQUORS, ALES, ETC.

Strong Port 25, Madeira 24, Sherry 19, Malaga 17, Brandy 53, Rum 53, Gin 51, Whiskey 52 to 54, Burgundy, 14, Sauterne 14, Champagne 12 to 14, Tokaya 9, Rudesheimer 10, Catawba 8 to 10, Cider 6 to 9, Mead 7, Burton Ale 8, Scotch Ale 6, Brown Stout 6, Porter 4, Strong Claret 17, Chateau Latour 9, Hock 9 to 12, Lachryma Christi 19, Vin Ordinaire 10.

ANTIPYRINE IN FRANCE.—In the discussion upon antipyrine during the session of the Société de Therapeutique of the 28th January, 1885, M. Dujardin-Beaumetz remarked that he had employed antipyrine hypodermically, which mode of employment he disapproves of, and does not hesitate to reject absolutely. He has thus obtained a notable exaggeration of the accidents, or rather the inconveniences, habitually produced by this remedy, such as profuse sweats and a peculiar nervous debility. There is nothing astonishing, moreover, in this debility showing itself, for it must not be forgotten that antipyrine is a phenol, and behaves after the manner of phenols. Hypodermic injections had not produced in his hands the decrease of temperature that he had a right to expect. M. Huchard had likewise observed that the administration of antipyrene gave rise to profuse sweats. But it must be remembered that this medicament may be obtained from different sources, and may be more or less adulterated. Thus the sweats appeared to him far more abundant from the day he began the use of a second supply. This does not prevent him from considering this substance as a veritable specific against the fever of patients suffering from phthisis. Besides, he has abandoned the large doses advised by the German authors, and, considering that it is sufficient to lower the temperature to 38 deg. or 38.2 deg. C., he gives but 0.50 centig. to a gramme in the twenty-four hours. In a case of typhoid fever, the medicine gave rise to an eruption very similar to the eruption caused by copaiba. He has derived no benefit from hypodermic injections. He administers the remedy per rectum, whether in the form of suppositories or injections, with equal success, and in the same dose as by the mouth. M. Dujardin-Beaumetz had used hypodermic injections of cocaine to the 1-50th, and had observed, when the patient was standing, sudden attacks of syncope, loss of consciousness, which, however, rapidly disappeared. When the patient is lying down, these phenomena are not observed. As they have not been noticed in Germany, we must suppose that the patients were always in the horizontal position, although the injections were made of solutions to the 1-10th. This does not prevent cocaine from being a valuable agent, which will be used, perhaps, for a much longer time than antipyrine.—*Progres Medical.*

THE USE OF ANTIPYRINE.—Dr. Glentworth R. Butler, of Brooklyn (in the *New York Medical Journal*), says: Antipyrene may be administered in powder or solution. If prescribed in powder, it is best to dissolve it in wine at the time of use; otherwise the coloring matter of the wine is precipitated by it. A solution made with water can be used, but the best excipient and the one which we have used in St. Mary's, is syrup of tolu. The slightly bitter taste of the drug is completely disguised, and children take it very readily. It can be given by the rectum. Its use hypodermically has caused no local irritation. A solution of antipyrine in half its weight of warm water will produce no deposit on cooling, and is suitable for subcutaneous injection. As to the dose, the general rule is to give it in double the usual quantity of quinine. In children under one year of age, three grains; under five years, seven grains; in adults, thirty grains can be administered, and followed by two doses, of half the quantity of the first dose, at intervals of one, two, or three hours, according to indications. It is preferably given in the afternoon, so as to anticipate the usual evening exacerbation. In tuberculosis it is often advantageous to give it earlier, as the temperature frequently rises by the middle of the day. Knowing the usual prompt and sure effects of the drug, it is generally easy to individualize each case, and vary the quantity and time of administration accordingly.

To summarize: 1. Antipyrine is a certain, safe and powerful antipyretic in almost all diseases attended by high temperature, but it is not an antiperiodic.

2. It is especially useful in typhoid fever, pneumonia, and phthisis, producing the apyrexia of quinine, salicylic acid, and cold baths, without the concomitant unpleasant effects of the latter.

3. The reduction of temperature occurs rapidly, and persists for an average of twelve hours.

4. Its dose is double that of quinine. Three grains for a child under one year of age, seven grains under five years of age, and thirty grains for an adult form the usual maximum dose. Half the quantity may be given subsequently at intervals of one, two, or three hours, according to indications.

## PROCEEDINGS OF SOCIETIES.

[NOTE.—The weekly medical journals very properly publish the proceedings of societies as soon as the societies adjourn. This journal being a monthly cannot, of course, do this; it will publish, therefore, only such carefully obtained proceedings of American and European societies as are most interesting and instructive.—ED.]

### ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Ordinary meeting, March 10th, Dr. GEORGE JOHNSON, F. R. S., President, in the chair. Mr. Frederick Treves read a paper on

### THE TREATMENT OF ACUTE PERITONITIS BY ABDOMINAL SECTION.

The extreme fatality of acute diffused peritonitis, especially of that form due to perforation, and the acknowledged futility of the modes of treatment that are at present employed, give some support to the proposal that acute peritoneal inflammations should be treated by the same methods that are successfully applied to other acute inflammations—viz., by free incision and drainage. This common and general surgical procedure had been already applied for the relief of inflammations of certain of the serous membranes. It was at first adopted in connection with the smaller serous cavities of those of the joints. It has been gradually, and with increasing freedom, applied in the treatment of inflammatory conditions involving the pleura. It has finally become a recognized means of treatment in certain forms of localized and chronic peritonitis, especially when purulent collections have formed. The author would urge the adoption of this principle in treatment in connection with acute and diffused forms of peritonitis. The following case was narrated: A female, aged twenty-one, was admitted into the London Hospital on January 21st, suffering from chronic pelvic peritonitis following severe gonorrhœa. On February 25th, three months after the commencement of the chronic peritonitis, she suddenly developed the symptoms of acute diffused peritoneal inflammation. The sequel showed that a large chronic purulent collection, containing very offensive matter, had formed near the left pelvic brim. The walls of the abscess were formed partly by the pelvic peritoneum and partly by many coils of small intestines that had become matted together. The acute symptoms were due to the bursting of this abscess and the extravasation of its contents into the general peritoneal cavity. On Februuary 26th, the abdomen was opened under antiseptic precautions, the patient being at the time apparently in a very critical condition. The general surface of the peritoneum showed the ordinary appearance of acute peritonitis. The intestines, where in contact, were lightly glued together. A quantity of semi-opaque fluid, mixed with flakes of lymph and pus escaped. The whole peritoneal cavity was washed out with many quarts of water and a drain introduced. The patient made a good recovery and was allowed in the garden on the fortieth day. The author alludes to several cases in which operations involving laparotomy have been performed with success during the progress of acute peritonitis, the cases having been in most instances the subject of error in diagnosis. Allusion is also made to the recent experiments on dogs, by Dr. Parkes, of Chicago, as to the treatment of penetrating gunshot wounds of the abdomen, with perforation. The author ventures to suggest the use of abdominal section in the treatment of certain cases of acute general peritonitis, such as that following injury, gunshot wound, the bursting of an abscess, and specified forms of perforation.

Mr. Howard Marsh read a paper on Acute Circumscribed Suppuration of the Peritoneum, treated by Abdominal Section, with recovery. The patient was a medical student, aged nineteen, who was first under the care of Dr. Andrew on December 17, 1883. He had suffered from constipation. When first seen the abdomen was distended and tender; there was no external hernia. To the left of the umbilical region, a swelling, eight inches square, was to be felt, which was dull to percussion, and painful; and there was a sensation of fluctuation in this swelling, and the skin over it was œdematous. An exploratory operation was decided upon. Vomiting had reduced the patient to the last degree. The patient was placed under chloroform, and an incision was made outside the linea semilunaris, when two or three pints of fetid pus escaped. The distended coils of small intestine could be felt through the wound, which was washed out with a 1 in 60 solution of carbolic acid, by means of a soft indiarubber catheter. A drainage-tube, eight inches long, the size of the little finger, was introduced, and carbolic dressings were used and retained in place by lightly applied bandages. At the end of four hours the patient rallied somewhat, and the pulse was 96, the temperature being normal. Much vomiting of merely clear bilious liquid was a source of trouble. On December 20th the pulse was 96, and the temperature normal. The patient slept fairly well. The vomiting occasionally recurred. Morphia was used to give sleep and relieve pain. A profuse discharge continued to escape, but the drainage-tube was shortened by an inch and a half. The patient was fed by nutritive enemata, and had taken nothing but a little iced water by the mouth. At this time the swelling still extended towards the right iliac fossa. On December 21st the temperature was 99°, but the area of dulness was diminished. The patient passed many light-yellow liquid motions. He had now begun to take milk and beef-tea by the mouth. On December 26th, the patient was much better, and the fæces were partly formed. He ate a minced chop on January 4th; he got up on January 12th. On February 20th the notes said that, with the exception of an attack of vomiting, the patient had progressed favorably. On March 7th the wound was healed, but the bowels never acted without enemata. Dr. Andrew and Mr. Marsh had come to no definite conclusion regarding the nature of the disease, but it was thought that an abscess in the mesentery around old tubercular glands might have burst. The disease was so very extensive that it could hardly be regarded as an ordinary circumscribed peritonitis. Further exploration was not made for fear of rupturing softened intestinal coils, and thorough exploration would have necessitated considerable enlargement of the wound. The patient was youthful, but probably an older patient would have died from exhaustion. He thought that in cases where there was any definite collection of pus in the peritoneum, the abscess should be opened and freely drained. He did not think that the operation would be attended with any large amount of success in cases of suppuration of the whole peritoneum, because of the extensive surface involved and of the difficulty of drainage afterwards. Furthermore, obstruction of the bowels dependent on the formation of extensive adhesions might be set up. In one case of the kind there was some fear that the obstruction was dependent on impaired peristaltic action, the result of the adhesions formed.

The President said that it was plain that the surgical procedure had saved the life of each patient.

Mr. Thomas Bryant thanked Mr. Treves for his valuable paper. The value of the paper was enhanced in that it advocated the application of well-recognized surgical principles in the treatment of abdominal abscesses. He thought that cases from other quarters to prove the correctness of his views might have been brought forward by Mr. Treves. Such, for example, as cases of abscesses about the cæcum, which, as Mr. Treves showed in his admirable demonstration at the Royal College of Surgeons, were really abscesses of the peritoneum, for there was no portion of the cæcum that was not surrounded by peritoneum. So that in all cases of cæcitis, and in cases of localized suppuration around the cæcum, the surgeon has had to deal with the peritoneal cavity. He had long felt that the practice advocated by Mr. Treves was one which had not been sufficiently followed. He had, however, for ten years past performed surgical operations on cases of localized suppuration in the peritoneum about the cæcum and pelvis. The cause of the peritonitis must determine whether the surgeon should operate or not. He did not recognize acute suppurative peritonitis as a disease by itself; peritonitis was the effect of some antecedent condition. The ultimate result of the treatment would be dependent on the cause of the peritonitis. He referred to a paper by Mr. Thomas Smith, by whom this subject was brought before the profession. It was published in the ninth volume of the St. Bartholomew's Hospital Reports.

Mr. Knowsley Thornton said that there was a form of peritonitis which appeared to be due to the mere presence of the tumor, and not to any perforation; whether strain or chill aided in the causation he could not say; but it was to this form of acute dry peritonitis that he would refer. On opening the peritoneum during life it was absolutely dry, velvety, and red. There were no neighboring adhesions. The first case in which he had performed the operation the patient died, with a high temperature and complete suppression of the urine. It would perhaps have been better to have waited till the acuteness of the inflammation had passed away. A second case was referred to, in which, after some time, the patient was greatly collapsed. The peritoneum was opened, and the same kind of dry peritonitis was discovered. The patient recovered after a very severe illness. He asked whether the condition of the intestines in Mr. Treves's case was one of intense vascular injection. In cases of perforation, the proper course was to operate at once. Drainage was a most important point. He did not think that the results of operation for gunshot wounds would be so good as in cases of perforation. With regard to the method of dealing with these cases, it seemed to him, unless the surgeon could be certain of obtaining absolute asepsis, antiseptic irrigation had better not be used. Where asepsis was impossible, he should use large quantities of boiled water, with free drainage, in addition to the other means of dealing with the injured parts.

Dr. Douglas Powell said that physicians were familiar with cases of peritonitis which were idiopathic and which were not suppurative. So that he thought that the title of Mr. Treves's paper should have been "The Treatment of Suppurative Peritonitis." Cases of peritonitis might be looked upon as analogous to cases of pleurisy, where we had to distinguish between suppurative and non-suppurative forms. He thought that the treatment of all cases of suppurative peritonitis should be conducted on strict antiseptic principles, and did not agree with the remarks of Mr. K. Thornton.

Mr. Barwell narrated a case of perityphlitis in a gentleman, in which an incision was made and eight ounces of pus let out; a counter-opening enabled twenty-four ounces of fetid pus to be discharged from the peritoneum. The wound was irrigated with large quantities of weak carbolic solution. Death took place eighteen months after the operation, from phthisis pulmonalis. He was in complete accord with the views of Mr. Treves.

Dr. Goodhart said he had been led to the opinion that surgery was nothing if not aggressive. He did not, however, consider that Mr. Treves had gone far enough; some cases of acute peritonitis not of the suppurative variety might be treated by abdominal section, though he confessed that Mr. Thornton's facts did not fit with his (Dr. Goodhart's) theories. Death took place in some cases of acute peritonitis from collapse, due to septic causes; the mode of death in these cases resembled that in dogs dying from the injection of artificial sepsin, and was of an almost sudden kind, though due to blood poisoning. A case of obstruction of the bowels, for which Littré's operation was performed after the method first adopted by Mr. Howse, was mentioned; in this some turbid fluid escaped during the first stage of the operation, and no more symptoms of obstruction remained; so that the second stage of the operation was never done. A growth in the bowel was found when death took place some months later; but the symptoms were due to the peritonitic condition, which the operation had relieved. There were a few cases of simple ascites, in which surgical interference might be sought by the physician; these cases were tapped time after time, and were sometimes due to cirrhosis or perihepatitis, and had recently been recorded as cases of "cirrhosis cured by tapping." Here, no doubt, there was agglutination of the visceral and parietal laminæ of the peritoneum, and the collateral circulation set up in the adherent membranes led to the cure of the ascites.

Mr. Meredith said that a 1 in 40 solution of carbolic acid was not sufficient to destroy any existing septic matter in cases of septic suppuration, and so he concurred in the remarks of Mr. Thornton.

Dr. Douglas Powell said that he believed that a weak solution of corrosive sublimate might be used, and would be sufficient to destroy septic matter. A hypodermic syringe for the purpose of ascertaining the state of any fluid collection in the peritoneum would prove most useful in practice.

Dr. George Johnson said that he for one should not hesitate to call in the aid of the surgeon in such cases. He asked whether in a case of simple ulcer of the stomach the surgeon would be prepared to interfere. Such cases were almost invariably fatal, though he knew of one case of recovery in which the patient was fed for twenty-seven days per rectum.

Mr. Treves, in reply, said that, with regard to Mr. Marsh's objections "on principle," he did not think they were borne out by Mr. Marsh's own successful case. From a common-sense surgical point of view, mere magnitude of the abscess ought not to deter the surgeon. The experience of ovariotomists showed that it was possible to clean the peritoneum very perfectly. Where the operation was done with a view of saving life, the occurrence of adhesions afterwards should hardly be weighed in the matter. It was probably a question of physics rather than of actual surgery whether opening of the abdomen would not relieve congestion of any vessel contained therein. As to the stage of the peritonitis, there would probably be some difficulty in defining the term "acute;" but cases in which he had urged operation would not admit of delay. In the last number of the *New York Medical Journal*, Dr. Bull had recorded a case of pistol wound of the abdomen, with four or five perforations of the bowels. The peritoneum was washed out, but the bowels were not resected, yet the patient made a perfect recovery. With regard to Dr. Powell's suggestion of corrosive sublimate, it should be borne in mind that an albuminate of mercury would be formed, and the antiseptic effect of the sublimate would be minimised thereby. Speaking generally, he thought the surgeon was called in as a last resort by the physician, and he much regretted that such should be the case.

Mr. Howard Marsh, in reply, said that he had not intended to convey the meaning put upon his remarks by Mr. Treves. In large abscesses of the peritoneum it would be difficult to keep the peritoneum thoroughly drained afterwards. That adhesions resulting from the operation could cause fatal obstruction of the bowels was proved by a case which had been under his observation.

## NEW YORK COUNTY MEDICAL ASSOCIATION. STATED MEETING, APRIL 20 1885. INCONTINENCE OF URINE IN CHILDREN.

Dr. J. Lewis Smith read a paper on this subject, the first portion of which was devoted to a consideration of the anatomy and physiology of the bladder, especially as regards its muscular coat and nerve-supply. The enuresis, which was more common among males than females, might be both diurnal and nocturnal, but was more frequently nocturnal. He mentioned eight causes, two of which might sometimes be present in the same case.

(1) Too great acidity of the urine, causing undue contraction of the bladder.

(2) Increased quantity of urine.

(3) The presence of stone in the bladder, in which case the incontinence is both diurnal and nocturnal.

(4) Abnormal contractile power of the muscular coat of the bladder. The importance of this cause is shown by the fact that belladonna, which controls muscular irritability, is useless in such a large number of cases of enuresis.

(5) Weakness of the muscular fibres constituting the sphincter of the bladder. This is rare in children in good health, and Dr. Smith gave an account of one case in which it was associated with spina bifida.

(6) Reflex action through the agency of the nerves supplying other organs in addition to the bladder. In this class are the cases due to structural disease of the spine, ascarides in the rectum, phimosis, preputial adhesions, etc.

(7) The dreaming of the child that it is in a convenient place for urinating. To this psychical cause attention has been directed by Dr. Roberts Bartholow. That the enuresis is to a a considerable extent under the control of the will is shown in cases where the habit has been broken up by the sending of the child among strangers, or to boarding-school, where the sense of shame has constituted an influence sufficient for the purpose. Numerous instances are also on record where a flogging has permanently broken up the habit.

(8) Malformation of the bladder or its appendages. Dr. Madden has reported the case of a young lady who suffered from a constant dribbling of urine, both by day and night, in which he found, on examination, that there was a malformation of the right ureter, which discharged the urine from the kidney on that side directly into the vulva instead of into the bladder.

The prognosis, Dr. Smith said, naturally depended on the cause or causes of the trouble. When the affection was not controlled before, the influence of puberty or of marriage and pregnancy seemed to be well-founded; but, of course, treatment was not to be delayed with any such idea in view. In the treatment the great point was to discover the cause. If the affection seemed to depend on the character of the urine, this was to be rendered as bland and unirritating as possible, and Dr. Smith said that since he had recognized the acid character of the urine as a frequent cause of incontinence he had been able to treat very satisfactorily quite a large class of cases which had formerly proved troublesome. It was his practice to endeavor to render the urine as bland as tepid water. If there was acidity he gave from three to five drops of liquor potassæ, well diluted, three, four, five, or six times a day, until the urine became neutral in reaction, and then to continue the alkali in just sufficient quantities to maintain the neutral condition.

When there was increased functional activity the great reliance was to be placed on belladanna. The tincture was the preparation commonly used in this country, and of this five drops might be given every night and morning, the dose being increased by one drop each day until the desired effect was obtained or the physiological action of the drug had become apparent. When belladonna was found efficient it was to be kept up for some weeks in full doses, and the quantity then gradually diminished. This agent had been highly lauded by Trousseau, who used it in large doses. Dr. Smith related a case in his own practice in which a girl eleven years old, who suffered from both diurnal and nocturnal enuresis, and who had previously taken belladonna and other remedies, was cured. The urine was highly acid, and the treatment which he prescribed was five drops of liquor potassæ three times a day (or more, if this was necessary to keep the urine neutral in reaction), and tincture of belladonna in nine-drop doses, the quantity gradually to be increased to fourteen or fifteen drops.

If the enuresis were due simply to the large quantity of urine secreted, the liquid food was to be restricted, especially toward evening, and if diabetes were present of course the treatment appropriate to that disease was to be adopted. In diabetes insipidus ergot was found to be of great service. Suspicion of the presence of a stone in the bladder would be excited by painful micturition, increased quantity of mucus in the urine, and the sudden stoppage of the full stream. The use of the sound would confirm the diagnosis, and the stone could then readily be crushed. In every case of incontinence it was important to make a careful examination of the parts contiguous to the bladder, such as the rectum and the genital organs, for the existence of ascarides, phimosis, preputial adhesions, hardened smegma, etc. If the enuresis were due to paresis of the sphincter, a treatment very different from that of belladonna was required, and here ergot, either alone or combined with nux vomica or strychnia, was found very useful in restoring the impaired innervation and stimulating muscular contractility. Two years ago Dr. George B. Fowler, of New York, had reported two very interesting cases, in which there was fæcal incontinence also, treated with ergot in combination with strychnia. In one there was a relapse, which was successfully treated with ergot alone, given by the rectum. Here there was a markedly relaxed condition of the sphincter ani, indicating, no doubt, that there was also relaxation of the sphincter vesicæ.

A considerable number of remedies which had been formerly employed to a large extent for incontinence of urine were now seldom used; but some of them were still deserving of confidence in certain special cases. Among these was strychnia. In children under four years of age there was some danger in giving it, and it was better to employ nux vomica under the circumstances, but above that age it was perfectly safe to use it. Tincture of cantharides, although as a rule an unpleasant remedy, could sometimes be employed with advantage if given in small doses. Cubeb and vegetable tonics and astringents were also sometimes called for. Dr. Smith then related a case reported by Eustace Smith, in which he successfully employed drachm doses of tincture of belladonna in combination with bromide of potassium and infusion of digitalis. It was to be borne in mind, however, that the English tincture of belladonna was only half the strength of the American preparation. Local treatment was often attended with a satisfactory degree of success, and the best agent for the purpose was nitrate of silver, applied for the cauterization of the neck of the bladder. Having referred to the use of baths and douches, Dr. Smith closed by speaking of the suggestion of Trousseau, that the patient should be required to urinate as frequently as possible during the daytime.

### DISCUSSION.

Dr. William Detmold thought that in the majority of instances nocturnal enuresis was simply a vicious habit, but one which was very difficult to be got rid of. He did not believe it was advisable to use the term incontinence of urine in this connection. The condition was one of enuresis, and not properly incontinence, true incontinence being indicated by a constant dribbling of the urine, both by day and night. This was observed in patients where there was some organic defect, as in the case of Dr. Madden, referred to by Dr. Smith, where the right ureter discharged into the vulva. When medicine had an effect in nocturnal enuresis he thought it was simply a moral effect, produced by the fear of the doctor or the nauseousness of the dose. The more unpleasant the remedy, therefore, the more efficacious it was likely to be.

Dr. J. W. S. Gouley said that he thought Dr. Smith's anatomy and physiology needed a little revision. There was no sphincter vesicæ in the same sense anatomically as physiologicaly, the so-called sphincter vesicæ not being at all comparable to the sphincter ani. Forty years ago it had been demonstrated beyond question that there was no such thing as an anatomical sphincter to the bladder, though there was a distinct physiological one. It was not the circular muscular fibres, but the longitudinal and oblique ones, which exerted this sphincter-like action. In regard to the compressors urethræ having any power to control the stream after it had once emerged from the bladder, as maintained by Dr. Smith, this was undoubtedly a mistaken idea, the physiological sphincter alone having any such control. He agreed fully with Dr. Detmold that the word incontinence, when applied to children who wet their beds, was incorrect, nocturnal enuresis being the proper term for this condition. The urine was passed, not because the bladder could not contain it, but because it had to hold too much. Dr. Smith had attributed to Professor Bartholow something which did not belong to him, as it was Jean Louis Petit, who lived more than a hundred and fifty years ago, who first called attention to the cause of nocturnal enuresis mentioned in connection with Dr. Bartholow's name. Petit stated that there were three classes of children who wet the bed: (1) those who were too lazy to rise and urinate; (2) those who slept so soundly that the sensation of desire which precedes the act of micturition was not sufficiently strong to awaken them; and (3) those who dreamed that they were urinating. Trousseau has added a fourth class, namely, those who through fear would not arise to urinate; but this class of Trousseau's, as well as the first class mentioned by Petit, he thought ought to be excluded, so that there would remain simply the second and third classes just stated. The most frequent causes of the enuresis were lithuria and polyuria, the latter being often met with in nervous children. Children, after they had become two or three years old, did not wet their clothing in the daytime, but only at night. In some instances such children retained the habit until they were grown, and he had seen men twenty-five, thirty, and forty years of age who were still subject to it. No amount of whipping could cure a child of wetting the bed; on the contrary, corporal punishment could do harm, and only make the condition worse. Lithuria was much more common in young subjects than was generally supposed. When this was present there was not an accumulation of urine, but a constant enuresis, both diurnal as well as nocturnal. Dr. Gouley said he did not at all agree with Dr. Detmold that treatment was of no service. On the contrary, he believed that there should be both local and general treatment. He thought, however, that it was a mistake to attempt to make the urine as "bland as tepid water," as Dr. Smith spoke of doing. This would only increase the enuresis, as very bland urine, like pure water itself, was known to be irritating to the bladder. Dr. Smith had spoken approvingly of lithotrity in cases of stone, but in children under the age of ten this operation had been tried and found wanting, lithotomy being in reality much more safe. As to cauterization, he trusted that Dr. Smith did not mean that this should be done with Lallemand's *porte-caustique*, as he regarded this as excessively dangerous. But in connection with the internal administration of iron, more particularly the old-fashioned tincture of muriate of iron, he had often afforded great relief by the introduction of the sound or catheter every two or three days. As a rule the stee sound, if skilfully used, was preferable to the gum catheter. In both girls and boys (although the number of the former that he had seen suffering from enuresis was quite small) he had observed excellent results from this practice, and he did not think Dr. Smith had mentioned the simple passing of the sound.

The Secretary, Dr. P. Brynberg Porter, said that he merely wished to call attention to the much greater tolerance of belladonna, proportionately, in children than in adults. In the *British Medical Journal* of February 7, 1885, Dr. E. Paget Thurston had reported a case of nocturnal enuresis in a girl seven years old. At first she was given ten minims of tincture of belladonna three times a day, but this had no appreciable effect upon the condition. He then ordered the belladonna in drachm doses, one dose to be taken in the afternoon, and another four hours later, just before going to bed. The second night there was no enuresis, after which only one dose a day was taken, at bedtime, and this was continued for four more nights. The cure was then complete and permanent. He had himself also often noticed in giving belladonna what large doses children could bear without showing the constitutional effects of the drug. He would like to ask Dr. Smith whether he had any experience with chloral hydrate in nocturnal enuresis. During the last few years this agent had been highly lauded in this condition, and he had personally tried it in a number of cases where the affection did not seem to be dependent on any removable local cause. While, however, in certain instances it had seemed to afford partial relief, as a rule he had been disappointed in regard to its action.

Dr. E. G. Janeway made some remarks in which he said that from his own experience he could abundantly confirm the truth of Dr. Porter's assertion in regard to the very marked tolerance of belladonna in children.

Drs. C. S. Wood, F. V White, and T. R. Varick, of Jersey City, also participated in the discussion, which was brought to a close by Dr. Smith.

Dr. Smith said that in his account of the anatomy and physiology of the bladder he had derived his information from some of the highest authorities, and that for the statement in regard to the action of the compressor urethræ

Belfield was responsible. In regard to the rendering of the urine bland and neutral in reaction, the good results which he had obtained since he had adopted this practice were sufficient, he thought, to justify him in continuing its use. He fully agreed with the gentlemen who had spoken in reference to the greater tolerance of belladonna in children, as was also the case with arsenic. In regard to chloral, he said that he had not tried it in this connection, but it seemed to him that if it was given in nocturnal enuresis it would only tend to aggravate the trouble by inducing more profound sleep. He agreed with Dr. Varick that it was very important that a careful study of the probable cause should be made in every case presented for treatment, and on this point he said he could not speak too strongly.—*Boston Med. and Surg. Journal.*

## ORIGINAL CORRESPONDENCE.

### THE DESIRABILITY OF A HIGHER STANDARD OF MEDICAL EDUCATION AND A MORE FRATERNAL FEELING IN THE PROFESSION.

*To the Editor of Gaillard's Medical Journal:*

It is a source of much mortification to many of the medical profession to see, in this age of progression, so little harmony among its members. The practice of medicine at the present day amounts to a cut-throat system, both in town and country. This is believed to be due io the very low standard of graduation in our colleges. They manufacture too many doctors in too short a time. Go where we may, we find a man called doctor, and often, instead of seeing him intelligent, modest, and gentlemanly in demeanor, we behold an ignoramus, a sot, a vulgarian, a blasphemer, or a vagabond. He is apt to be proud of his title, but is "most ignorant of what he is most assured." A little learning, to say nothing of the whiskey he takes, intoxicates his brain, so that he talks loudly and much of his attainments, while people listen, and, strange to say, are often impressed with the conviction that he is a "wise and marvellous man." Being ignorant, he is ever presumptuous, and this picture is a type, alas, of only too large a class of doctors. We are glad, however, that we have many noble gentlemen in the profession—many who are great and good—and we are proud of them. Would that we could weed out the bad.

There are at this time 90,000 physicians in this country, or one to every 600 inhabitants—more doctors, in proportion to the population, than in any other part of the world. No wonder, then, that we have here such a cut-throat system in the practice of medicine. If the standard of graduation were made higher, and no one were permitted to practice without a diploma, indicating that its possessor had passed satisfactory tests of his knowledge of medicine, physicians, being fewer in number, would be more courteous to one another, more appreciated by the people, and far better paid. We have, at last, a Medical

Examining Board, in this State, though its duties are not retrospective as regards those who were practicing prior to its confirmation. This Board consists of a large number of gentlemen; but it should have consisted of six instead of thirty-two members. Then it would have been of service to the State. The State Society, surely, desired to compliment too many of its members, for compliments made too common are not often valued.

I visited, a few weeks ago, a town in this State, of 26,000 inhabitants, possessing much wealth and refinement, and was told, by several physicians, that there was but little good feeling among the profession. Although doctors are numerous, there is not a medical society in the town, because they are always at strife among themselves. Now, let me draw a contrast.

Some years ago I spent several days in the city of Montgomery, Ala. There I met with the most intelligent, gentlemanly, and harmonious physicians I have ever had the pleasure of seeing. There were at that time twenty-four in the town. They had an attractive *club-room*, where I was invited and entertained. I was also asked to the residence of Dr. Baldwin (a former President of the American Medical Association) to meet a number of the profession, and so I became acquainted with nearly every practitioner in the town. It was with great pleasure that I saw that each one appeared proud of the success and attainments of the other; and Dr. Baldwin, whom I shall always remember as a most charming and accomplished gentleman, seemed to be proud of them all. How delightful would it be could we have the same state of things all over our land! Yours truly, ISAAC WHITE, M.D.

Shawsville, Va.

### THE USE OF "CAULOCOREA."

*To the Editor of Gaillard's Medical Journal*—

Dr. J. W. Lowell, of Portland, realizing the fact that uterine tonics are better when combined than when given in Galenic prescription, has presented to the profession a combination of some of the best known of such tonics and sedations under the name of *Caulocorea*, and the following case will serve to illustrate one of its applications:

Mrs. L., aged 48, had for eight years suffered with loss of flesh and indigestion attended with failure of appetite. Had been treated by several physicians and tried various recommended drugs to arrest waste of flesh, with little or no good result. About a year ago I advised her to try Caulocorea, which she took for some time. I found that after two weeks' exhibition, her skin, which had been dry and dusky, became moist, and her complexion a better color; her appetite also improved, and several articles of diet which before she could not eat without causing diarrhœa were now taken with relish and good digestion. I continued to use the remedy for several weeks and found her health greatly improved. She gained many pounds in weight, while her complexion became good, and her energy renewed.

I might mention several cases to show the efficacy of this remedy in troubles of digestion and nutrition. It also has a prompt effect in restoring the inertia of the pelvic organs, by its action on the genital centres. The following are the ingredients of the compound: caulophyllum thalictroides, viburnum opulus and prunifolium, aletris farinosa, diascorea villosa, mitchella repens, and Hoffman's anodyne.

Dr. I. J. M. Goss, of Georgia, in his "New Remedies," says of viburnum prunifolium: "It has many properties in common with viburnum opulus, but differs somewhat in many respects. Both of these plants have the smell of valerianic acid, and undoubtedly contain it. Its most valuable therapeutic use is its preventive power over threatened abortion. For some twenty-five years I have used this article in cases of habitual miscarriage, and have never failed when I saw the case in time. It is a very positive remedy in after-pains. It antidotes cotton-root when the latter is used to produce miscarriage. It completely neutralizes the effects of glossypium, compelling the criminal mother, however unwilling, to carry her offspring to full term. As an antispasmodic to the uterus, it removes many of those harrassing nervous symptoms that so often torment, wear down, and disqualify the pregnant woman for the final parturient effort. In dysmenorrhœa I have found no remedy so prompt and kindly acting as virburnum. In menorrhagia it is a very valuable remedy. The virburnum opulus has similar effects upon the female reproductive organs."

Says Dr. Line, in the *Mississippi Med. Monthly*, of the two viburnums: "Their action is supposed to be somewhat similar, with a specific influence upon the uterus—nervine, antispasmodic, diuretic, astringent, tonic."

Aletris farinosa is another uterine tonic, not inferior to caulophyllum, and Dr. D. P. Duncan, of Georgia, maintains, as he says, without fear of successful contradiction, that it stands unrivalled as an agent of this character. He has used it in irregular and suppressed menstruation, and states that he has yet to see one single failure with it.

Baltimore, Md. J. J. CALDWELL.

## REVIEWS.

MICRO-CHEMISTRY OF POISONS, INCLUDING THEIR PHYSIOLOGICAL, PATHOLOGICAL, AND LEGAL RELATIONS; WITH AN APPENDIX ON THE DETECTION AND MICROSCOPIC DISCRIMINATION OF BLOOD: Adapted to the use of the medical jurist, physician, and general chemist, by THEODORE G. WORMLEY, M. D., Ph. D., LL. D., Professor of Chemistry and Toxicology in the Medical Department of the University of Pennsylvania. With ninety-six illustrations upon steel. Second Edition. Philadelphia, J. B. LIPPINCOTT Company, 1885. Pp. 784. Cloth, $7.50.

There have been but few works contributed to medical and scientific literature by American authors which are worthy to be ranked in standard value with this second edition of Wormley's "Micro-Chemistry of Poisons." The first edition, published in 1867, was in every way admirable; but the present one shows in almost all particulars a marked advance upon it. All the subjects that were treated of in the earlier edition have been thoroughly revised; what has become obsolete or been shown to be erroneous having been discarded, and such alterations made in the text as to render it a complete exponent of our present knowledge in regard to them; while a very large amount of entirely new material has been added. Among the latter is the appendix on the nature, detection, and microscopic discrimination of blood, and articles on gelsemium poisoning, and poisoning by potassium chlorate, post mortem diffusion of arsenic, arsenic in medicines, in fabrics, and in glass, Dragendorft's method of the recovery of vegetable principles, the nature of ptomaines, and the preparation, properties, and recovery of jervine. The chemical nomenclature of the former edition, it is stated, has been entirely revised and made to correspond with the more recent views of chemists on that subject.

The whole work shows a vast amount of original investigation, a feature which, as a rule, is too commonly lacking in American treatises, as well as a thorough familiarity with the labors of all the most reliable scientific authorities in this department; and it especially commends itself to the medical and legal professions in the United States, on account of the large number of illustrations throughout its pages derived from American sources. Thus, to take an instance at random, in the article on antimony the following cases reported by American physicians are quoted: Remarkable case of recovery, by Dr. J. T. Gleaves (*Western Jour. of Med. and Surg.*); fatal case in a young lady, aged 21 years, by Dr. C. Ellis (*Boston Med. and Surg. Jour.*); nearly fatal collapse from half a grain of tartar emetic, by Dr. Alfred Stillé (*Mat. Med.* ii. 346); poisoning of a child a few months old, by Dr. C. A. Lee (*N. Y. Med. and Phys. Journal*, xxx., 302); recovery of a physician who swallowed half an ounce of tartar emetic by mistake for Rochelle salts, by Dr. McCreery (*Amer. Jour. Med. Sciences*); recovery of a woman after taking sixty grains of tartar emetic, communicated to the author by Dr. R. Denig; and a case reported in the *N. Y. Med. Record*, in which a patient recovered after taking 170 grains of the salt. It is not to be inferred from this, however, that the reports of European cases are by any means neglected.

In the article on mercury Prof. Wormley says that the external application of corrosive sublimate has not infrequently been followed by fatal results. Although he gives a number of instances, he does not refer to any in which the drug was used for antiseptic purposes, no cases of this kind, probably, having yet been reported at the time when the revision of this part of the work was completed. It has been complained by some reviewers that the section on "Ptomaines" is too much abridged; but this criticism seems to be hardly justified, since the author does give a carefully prepared epitome of the present knowledge on the subject, while it ought not be forgotten that, as he says (from a consideration of the facts thus far collected), "it is obvious that much uncertainty still exists in regard to the nature and production of the so-called ptomaines."

His testimony in regard to the relations of daturine, the active principle of stramonium, and atropine is conclusive, and he sums up the matter by saying: "The identity of these two alkaloids, in regard both to their properties and physiological effects, is now generally conceded.

Of jervine, one of the alkaloids of veratrum album and veratrum viride, he says that of all the alkaloids there is none, according to his own experience, so readily recovered in its crystalline state from the blood when carried to this fluid by absorption. In this connection it is of interest to note that Prof. Wormley (in the year 1870) was the first to obtain, in its pure state, and examine chemically gelsemine, the powerful active principle of *gelsemium sempervirens.*

His conclusions in regard to the medico-legal value of microscopic examination of blood are given in the following sentences: "Hence, then, the microscope may enable us to determine with great certainty that a blood is *not* that of a certain animal, and is *consistent* with the blood of man; but in no instance does it, in itself, enable us to say that the blood is really human, or indicate from what particular species of animal it was derived. There seems to be much misunderstanding as to the true value of this instrument in investigations of this kind, it being regarded by some as nearly or altogether useless for this purpose, whilst others claim for it results wholly at variance with the facts in the case. This, like many other tests, has its fallacies, and if these, in a given case, cannot be reasonably met, the accused should have the benefit of the doubt."

No notice of this book would be complete without a reference to the exquisite steel plates which form so attractive a feature of it, and in which an additional interest is naturally felt by the reader when he has been made acquainted with their source. These, with one exception, have been drawn and entirely executed by the accomplished wife of the author, to whom the volume is appropriately inscribed, and in this edition there are two new ones by her, affording twelve additional illustrations of crystals. The remaining plate, which is also new, shows the *apparent* size of the red corpuscles of the blood of six different mammals, under the power of 1,150 diameters, and Prof. Wormley states in the preface to the second edition that these latter illustrations were drawn on steel by his daughter, Mrs. J. Marshall, and are accurate, on the steel, within at most about 1-1000ths of an inch. A fine chromo-lithograph of blood-spectra and some wood-cut illustrations have also been added in this edition. The publishers have done all in their power to furnish a worthy setting for so valuable a treatise, and altogether the work is a really superb one.

THE LONDON MEDICAL STUDENT AND OTHER COMICALITIES.—Selected and compiled by Hugo Erichsen, M.D. Published by Dr. H. Erichsen, 11 Farmer St., Detroit, Mich. Price $2.00.

The reviewer of this book is not a medical man, but has been requested by his friend, the Editor, to give his "opinion" of it because he is a funny man.

And funny enough the book is for the doctors, "or any other man." It may be heresy to say so in a medical journal, but as a layman, the writer is bold enough to think that it will do more good to the patient than pills, paregoric, or panacea; for it will make him laugh, get well, and grow fat. It is full of fun; and though this fun is at the expense of the doctors, they will none the less—probably all the more—enjoy it. Three-fourths of the volume of 200 pages is taken up with "The Physiology of the London Medical Student," which, the compiler tells us, "is taken from the London *Punch*, where it was published about half a century ago;" and although he has failed to ascertain who wrote this "sparkling portraiture of medical-student life," he attributes the authorship to Hood, Dickens, Thackeray, Mark Lemon, or Douglas Jerrold. We are introduced to Mr. Joseph Muff at the time when he first enters the medical school; and accompany him and his colleagues through all their arduous labors in the dissecting room, the lecture hall, the public house, and the midnight streets of London. From the character of these labors we gather the impression that these exemplary young men held the sound opinion that to indulge in the luxury of studying anatomy and physiology too assiduously and unremittingly would injure the constitution; and therefore it was their duty to relax the mental strain occasionally, and give themselves to the gentle recreation of wrenching off door-knobs, singing and dancing in the public-houses, and battling with their natural foes, the policemen—or, as they called them, "the crushers." In all these exercises they were sustained and strengthened by the constant imbibition, in unlimited quantities, of "half-and-half," and this inspiring beverage was even introduced into the dissecting-room, where delightful little suppers of sprats were cooked and eaten to the music produced by the rattling of the bones of departed "subjects."

Through scenes such as these—which must be read in full to be appreciated, we follow Mr. Muff, until we find him at last fully established in a quiet village as a practitioner, where, being short of drugs, he, in an emergency, "cuts a glorious calomel pill out of pipe-clay, and concocts a black-draught of Epsom salts and bottled stout, with a little patent boot-polish," and administers them to his unsuspecting patients. Such are the resources of medical science; and perhaps some of our transatlantic medical men may gather some valuable practical hints by a perusal of this volume.

The best part of the book, perhaps, is the last fifty pages, which is made up of "medical anecdotes, funny sayings and doings of medical men," accompanied by the unfamiliar motto:

> "A little nonsense now and then
> Is relished by the wisest men."

and if the doctors are not the wisest men, who are, pray?

Our readers will, no doubt, enjoy two or three specimens of these anecdotes, and they can therefore form their own diagnosis of the case.

"In lecturing on the recognition of the sex of the child in utero, a noted professor was expatiating on the theory of the pulse-rate, claiming that if the pulse beat 120 per minute the child was a boy; if 140 per minute, the sex was female. A terribly dull student electrified the class by inquiring whether if the pulse-rate be 130 would the result be a hermaphrodite." Why the author should designate this student as "terribly dull," however, is not apparent. The chances would seen to us to be that a pupil who could get a thing of that kind off on the instant was probably the brightest sawbones of the lot.

"In filling out a 'birth return,' in a case in which the name of the father was doubtful, a Chicago doctor, with prompt exhibition of forethought equal to any emergency, filled in the blank 'E Pluribus Unum.'"

"A lady visiting a friend just confined remarked to the grandmother: 'How small the child is!' The old lady replied, 'Well, we had a homœopathic doctor.'"

"A man falls on the street in a fit. As the doctor hastens up a bystander exclaims: 'Oh, if he'd only come sooner!' But the doctor looks up from the fallen man and remarks, 'He is dead; I myself could have done nothing more.'"

"So you have twins at your house, Johnnie." 'Yes'm, two of 'em.' 'What have you named them?' 'Thunder and Lightning, ma'am.' 'Why, what very singular names!' 'Yes'm, that's what pa called 'em soon's the doctor brought 'em.'"

BERLIN AS A MEDICAL CENTER: A GUIDE FOR AMERICAN PRACTITIONERS AND STUDENTS. By Horatio R. Bigelow, M.D., Member of the American Medical Association; of the Medical Society and Medical Association of the District of Columbia; of the Anthropological and Biological Societies of Washington, D. C. (Reprinted from the *New England Medical Monthly.*) Sandy Hook, Conn., New England Publishing Co., 1885. Pp. 117.

This is an excellent little book of its kind, affording, in a very concise form, all the information that a medical practitioner or student can require in order to avail himself, in the most simple and satisfactory manner, of the advantages to be derived from a sojourn at the German capital; and any such individual contemplating this experience for the first time will save himself an immense amount of trouble and annoyance, to say nothing of the matters of time and expense, by having it in his possession. He will find in it just what he wants to know, and among the topics treated are: The expenses, the arrival in Berlin (with an account of hotels, restaurants, family *pensions*, cafés, telegraph offices, libraries, postal rates, etc.), matriculation and courses; the various hospitals and clinics; information in regard to shopping, banks and bankers, omnibus routes, amusements, money, etc. In regard to the voyage across the ocean, the accommodations and rates of only one line of steamers are given; but this is a thoroughly reliable line, whose prices are probably lower than those of others affording the same facilities. A valuable addition to the book is

Kiessling's map of Berlin, accompanied by an alphabetical index to all the names to be found upon it, with the number of the district of the city in which the street, building, bridge, or park is situated.

### ON IDIOPATHIC ANÆMIA: A REPORT OF THREE CASES, WITH REMARKS, AND AN ANALYSIS OF THE CASES HITHERTO PUBLISHED IN AMERICA.

By J. H. Musser, M.D., Chief of the Medical Dispensary, Hospital University of Pennsylvania; Pathologist to the Presbyterian Hospital, etc. Philadelphia: Reprinted from the Proceedings of the Philadelphia County Medical Society, 1885.

This is to be regarded as an extremely valuable contribution to American clinical medicine, which deserves a much more extended notice than it is possible at this time to devote to it. In placing these three most interesting cases on record, the author expresses his conviction that idiopathic anæmia is as capable of distinction, clinically, from other anæmias as is one form of Bright's diseace from another, and that in the absence of proof that the bone marrow changes are not secondary, it cannot be called pseudo-leukæmia. As our knowledge of the blood increases he believes the fundamental cause of the affection will be determined, and the expression idiopathic will be improper and eradicated. In his analysis of cases of idiopathic anæmia recorded in America Dr. Musser presents two tables: the first of thirty cases, in which there was an absence of changes in the bone marrow, or its appearances were not recorded; and the second of nine cases, in which lesions of the bone marrow were found.

### PLANTING TREES IN SCHOOL GROUNDS, AND THE CELEBRATION OF ARBOR DAY.

This is a pamphlet issued for circulation by the Department of the Interior at Washington, in response to the demands made on the office for information respecting "tree planting and the celebration of Arbor Day." The subject is a pretty one, and very pleasantly treated, and no doubt much good will result from the publication of the pamphlet. It contains many lessons from history, proving the importance of tree culture and preservation of forests in all countries, while the evil consequences of the devastation of the natural forests are vividly set forth. Indeed, all the manifold ills of life seem suddenly to owe their origin no longer to the sinister movements of the Gulf Stream. This noble body of water is cleared of the stigma which has for some years past rested upon it, and the great source of evil is now proved, beyond all cavil, to be the clearing away of forests. This is a most timely discovery. Statistics have been carefully gathered from Central Asia, the Island of Ternate, Algiers, Kentucky, Germany, Switzerland, Ohio, Palestine, and elsewhere and everywhere, to substantiate the facts presented, and the book closes with many extracts, in prose and in verse, from the writings of many gifted authors, all of which pay welcome tributes to trees and to forests. But, while one must smile at the extreme importance attached to this subject, the smile is quickly attended by a sigh when the reflection follows that, in order to impress one little truth upon the public mind, so much leverage of fact and fancy, fiction and philosophy must be brought into use. The public, which delights to honor quackery wherever it can be found, which adopts each latest device of the charlatan or the fanatic to befool or mislead it, requires lengthy arguments and enormous statistics, assisted by poetical reinforcements, to prove that all the trees of all the countries should not be cut down, and that farmers and proprietors would do well to have some system of regular planting. That public interest has been excited to some extent in the matter, however, is indicated by the hearty and spirited manner in which the recent "Arbor Day" in Pennsylvania was celebrated at Lancaster, and other places in the State.

### CIRCULAR OF INFORMATION NO. I, 1885, OF THE BUREAU OF EDUCATION, WASHINGTON, D. C.—CITY SCHOOL SYSTEMS IN THE UNITED STATES. By JOHN D. PHILBRICK, LL.D.

This admirable pamphlet is a general survey—historical, critical, and comparative—of certain features and characteristics of the public school system. It is full of wisdom and of strong thought in the right direction, and carries the reader along in full conviction that Mr. Philbrick has pondered long and well over his subject, and that his views are incontrovertible. So forcibly does this fact impress the reader, that he is tempted to exclaim with Plato, at each wise suggestion and unanswerable argument, "How not, oh Socrates!" and to endorse without any hesitation the sound principles and admirable practices herein elaborated.

### THE ECLECTIC MAGAZINE OF FOREIGN LITERATURE. New York: E. R. Pelton, Publisher.

This old-established monthly, with its varied store of literary riches, representing the lighter aspects as well as the most profound and serious work of contemporary European thought, is always a welcome guest in one's library. In the June number, which completes the forty-first volume of the new series, commenced in 1865, will be found an unusually large number of notable and attractive articles. The one which will, no doubt, be read with the greatest interest is that on "The Russian Advance in Central Asia," by Major-General Sir Henry Rawlinson, from the *Nineteenth Century*; and among the others will be found, "The State Versus the Man," by Emile de Laveleye; "Organic Nature's Riddle," by St. George Mivart; "Concerning Eyes," by William H. Hudson; "The Comparative Study of Ghost Stories," by Andrew Lang; "The German Abroad," by C. E. Dawkins; "Social Science on the Stage," by H. Sutherland Edwards, and "A Comment on Christmas," by Matthew Arnold. In the "Literary Notices" are able reviews of Stepniak's "Russia Under the Tzars," Taine's "French Revolution," volume 3, "Life and Labors of Louis Pasteur," by his Son-in-law, and other recent works of value.

# BOOKS AND PAMPHLETS RECEIVED.

"Watson on Amputations," P. Blakiston, Son & Co., publishers, Philadelphia.

"Van Arlt on the Eye." P. Blakiston, Son & Co., publishers, Philadelphia."

"The Oleates." By John V. Shoemaker, M. D. Philadelphia: F. A. Davis, Att'y, 1885.

"Annual Report of the Surgeon-General of the Navy." Washington: Government Printing Office, 1884.

"Proceedings of the Seventh Annual Meeting of the Sanitary Council of the Mississippi Valley, Held at New Orleans, March 10 and 11, 1885." Published by order of the Illinois State Board of Health.

"Catalepsy in a Child of Three Years." By A. Jacobi, M.D. Reprinted from the *American Journal of the Medical Sciences* for April, 1885.

"Fifty Cases of Abdominal Section; with Remarks on Laparotomy." By James B. Hunter, M.D. Reprinted from the New York *Medical Journal.*

"Ovariotomy." By James B. Hunter, M.D. Reprinted from the New York *Medical Journal.*

"Pneumonia in Young Children." By L. Emmett Holt, M.D., Attending Physician to the Children's Department of the Northwestern Dispensary, etc. Reprinted from the *Medical Record,* February 14, 1885.

"Railroad Injuries of the Extremities of the Human Body; with Observations on the Site of Amputation and Subsequent Treatment of the Stump." By T. R. Varick, M.D., Medical Director of and Surgeon to St. Francis' Hospital, Jersey City, N. J., etc. Read before the American Medical Association, 1884.

"Specialties, and their Relation to the Medical Profession." By L. Duncan Bulkley, A. M., M. D., Attending Physician for Skin and Venereal Diseases at the New York Hospital, Out-patient Department, etc. Reprinted from the *Journal of the American Medical Association.*

"Disinfection and Disinfectants." Preliminary Report made by the Committee on Disinfectants of the American Public Health Association.

"Report of Proceedings of the Illinois State Board of Health." Quarterly Meeting, Chicago, April 16-17, 1885.

"A Case of Psycho-Sensory (Affective or Moral) Insanity." By C. H. Huges, M. D., St. Louis, Mo. Reprinted from the *Alienist and Neurologist,* April, 1885.

"Insanity and Divorce, etc." By C. H. Hughes, M. D., St. Louis, Mo. Abstracted Editorials from the *Alienist and Neurologist,* April, 1885.

"Valedictory Address by the Retiring President, Fordyce Barker, M. D. L L. D." Delivered before the New York Academy of Medicine, February 5, 1885. New York: Printed for the Academy of Medicine, 1885.

"The Raleigh Academy of Medicine vs. The Knights of Honor, Knights of Pythias, etc., and Kindred Benevolent Orders, with Insurance Features. A Review of the Controversy, Embracing the Correspondence between the Academy and R. B. Ellis, M. D., Medical Examiner for the Orders at Raleigh, N. C.

"The Twelfth Annual Report of the Medical and Surgical Staff of St. Francis' Hospital, Jersey City, N. J."

"Ninth Annual Report of the Managers and Officers of the State Asylum for the Insane, at Morristown, N. J."

"State Provision for the Insane." By C. H. Hughes, M. D., St. Louis. Reprinted from the *Alienist and Neurologist,* April, 1885.

"The Management of the Abscesses of Hip Disease." By A. B. Judson, M. D. Reprinted from the New York *Medical Journal.*

"Liberty Enlightening the World." Song. Words by George Cooper. Music by Fred. A. Rothstein. Published by B. W. Hitchcock, 166 Nassau street, New York.

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## MISCELLANEOUS.

THE TREATMENT OF FRACTURE OF THE PATELLA.—At the session of the French Surgical Congress, April 8, 1885, Professor Tilanus (of Amsterdam) passed in review the different modes of treatment of fracture of the patella, and he thinks that the best is that which he has adopted, and which he calls the Holland treatment; it consists in doing away with immobility, which he replaces by massage and movement of the limb; he adheres to compression. The following are the rules laid down by M. Tilanus: The first day, to combat articular effusion and pain by the application of cold compresses upon the joint; from the second day, compression and massage to be continued about eight days; finally, at the first week of treatment, to commence practicing movements of flexion and extension of the limb. From this time, the patient may be allowed to walk. M. Tilanus claims for his method of treatment the following advantages: a shorter duration, forty-one days instead of several months; the weight raised by the foot is 3 kilograms, ½ instead of 3 kilograms; the average distance between the fragments is 0.72 centimetres instead of 2 centimetres. The separation of the fragments has, moreover, but little importance in the walk of the patient. M. Tilanus is by no means favorable to the use of the suture between the fragments; not more than M. Verneuil would he accept the suture after arthrotomy, even if the operation was performed by Lister himself; but he would strongly recommend to Dr. Verneuil the practice of movement with massage.—*Union Medicale.*

THE VIRGINIA MEDICAL MONTHLY.—This excellent journal began its twelfth volume with the April issue, and it is to be heartily congratulated on the improvements which have been made in it with the commencement of the volume. In its editorial on the first session of the State Board of Examiners, the *Monthly*, says: "A new era for the profession of Virginia has begun. This sitting of the State Board of Medicine, April 8 and 9, was the beginning of a long-sought and a permanent benefit to the people and the profession of this State.

THE NEW ENGLAND MEDICAL MONTHLY for April 15 presents, with a sketch of his life and eminent career, an engraving of Professor Austin Flint, which is a striking likeness, though it does not give that genial expression which is the great charm of his countenance to those who enjoy the privilege of knowing him well. This issue of the journal is increased by sixteen extra pages of valuable and interesting reading matter, and the whole number is in every way admirable.

COURT PLEASANTRIES.—In a report published in one of the daily papers, of a recent day's sessions in the famous Hoyt will case, the extraordinary procedure of a well-known homœopathic physician and the brilliant scintillations of wit to which the narration thereof gave rise, is given as follows: " Dr. Millard testified that Miss Hoyt had many imaginary ailments, among them a belief that she had diphtheria and that she had coagulated blood upon her brain. The doctor testified that to humor her he called a professional cupper and leecher, who also conducted an employment agency for nurses. This man bled her a trifle behind the ear, and then showed her a clot of blood on a plate, and she after that considered her head all right.

" 'Did the nurse obtain the blood from her head ?' Gen. Butler asked.

" ' He wasn't a nurse, answered the witness; he only kept a nurse agency.'

" ' If he kept a nurse agency,' returned the Massachusetts statesman doggedly, 'he was a nurse.'

" 'Then I suppose if a man keeps a stable he's a horse,' suggested Senator Evarts wearily.

" 'Or if he drives an ice wagon he's a cold in the head,' murmured Mr. Root sadly."

It is not recorded whether ambulances had to be sent for to convey the learned legal luminaries to their homes in consequence of the exhaustion necessarily incident to such a stupendous strain upon the vital energies of the cerebral cortex.

RAISING A HORNET'S NEST.—Prof. T. B. Stowell, of the State Normal School at Cortland, N. Y., has drawn upon his devoted head an avalanche of feminine objurgation, and gotten himself into no end of trouble generally, by the following statements, made by him in a lecture on " The Effect of Alcohol on the Human System, delivered in May, at High School in Syracuse: " Opium in some form or other is used by women just as generally as tobacco is used by men. Girls use opium just as much as boys use cigarettes. If the druggists would tell what they know it would arouse the city in a night."

THE LAST SIX DAYS SKATING MATCH.—It is satisfactory to learn that, at the conclusion of the six-days roller skating match which came off at the Madison Square Garden in this city last month, the manager of the race was $4,000 out of pocket; so that the experiment is not likely to be repeated for some time to come.

A SENSIBLE CLUB.—An "Outing Club" has been formed of the members of the Young Men's Christian Association of this city, which has for its objects the encouragement of open-air exercise and social fellowship. The first ramble of the club took place on May 30, in the classic region of Sleepy Hollow, than which there is nowhere in the world a more attractive locality for an afternoon's stroll; the members walking from Irvington station, on the Hudson

River Railroad, to "Sunnyside," the old home of Irving, and from there to Scarborough; passing on the way the quaint little Dutch church in whose graveyard he lies buried, the entrance to Sleepy Hollow, and the monument erected on the spot where Major Andre was captured. The length of the tramp is about seven miles, a distance certainly within the powers of the most indifferent pedestrian.

A CHEERFUL KIND OF RACE.—A resident of Port Chester, N. Y., having been found dead in his bed (from disease of the heart), one morning recently, and the news having spread rapidly, quite an exciting race resulted between the coroners of Mount Vernon and White Plains, two neighboring towns, for the privilege of holding the inquest. The Mount Vernon coroner, however, arrived six minutes ahead of his rival, and so secured the coveted fee.

AN INCONSIDERATE PATIENT.—M. D. (absent-mindedly).—"Lost, lost!" Weeping spouse.—"Oh, doctor, you can't mean it! Shall I really lose him?" M. D.—"You? No; I meant that he was lost to me. He's going to get well right away, confound him!"—*Puck.*

A YEAR'S WORK IN LAPAROTOMY.—At the March meeting of the Obstetrical Society of Philadelphia, Dr. William Goodell read a paper in which he said that during the past year he had had thirty-two laparotomies, of which twenty-two were ovariotomies, eight oophorectomies, one hysterectomy, and one exploratory incision. Of the twenty-two ovariotomies, ten were performed in the hospital of the University of Pennsylvania, with three deaths; seven at his private hospital, with one death. In eleven both ovaries were removed. Seventeen had adhesions, which in seven were very formidable. Four of the women were over sixty years of age, and of these one died. In not a single instance did he refuse to operate, although three of his patients were very ill at the time of the operation. With regard to the causation of ovarian cysts, he believed more and more that single life, sterility, and unfruitfulness, whether natural or enforced, were important factors. Thus, out of his twenty-two cases, nine were not married and one was a widow. Again, of the married, one was sterile, one had borne but one child, and three had had only two children. Three of the eight oophorectomies were demanded for excessive menorrhagia and dysmenorrhœa from multiple fibroids, and two of them died, the difficulties of the operation being great. The other oophorectomies were performed for pernicious menstruation, ovaralgia, and threatened miscarriage, and were successful. In no case did menstruation return, although in one there was a slight show of blood. Of other laparotomies he had performed two, one of them an exploratory incision in a woman greatly reduced by pain and obstruction of the bowels. Cancer of the pelvic organs was discovered. She died very suddenly from supposed embolism. The other laparotomy was a successful hysterectomy. The tumor weighed thirteen and a half pounds and consisted of the womb with many large fibroid growths. The adhesions to the abdominal walls, bowels, and omentum presented many difficulties and needed many ligatures. The stump, which was fully four inches in diameter, was encircled by Koeberle's wire-clamp and treated outside of the peritoneal cavity. The patient recovered slowly and without a bad symptom.

THE TREATMENT OF LOCOMOTOR ATAXIA IN THE PRE-ATAXIC STAGE. —In a paper read before the Chicago Medical Society on March 16, Dr. D. R. Brown says: The foundation for the successful treatment of the pre-ataxic stage of this disease is rest—absolute, positive, and prolonged. The recumbent posture should be maintained for several months. This proposed idea in the treatment is an innovation, but it is based upon the scientific fact, generally recognized, that a diseased organ should have its functional activity reduced to a minimum quantity. Hence this principle applies with equal force to the spinal cord; for rest, accompanied as it is with diminution of nutrient activity of nerve fibers and diminution in the caliber of the blood-vessels, must be antagonistic to the pathological process that has begun. But it is necessary to maintain (as Dr. Wier Mitchell has taught us in his treatment of hysteria) the greatest activity of general nutrition and prevent wasting of the muscles. The judicious use of massage and passive movements will enable us in a case of locomotor ataxia to replenish the muscular system in the recumbent posture. The diet should be of the most nutritious character; cod liver-oil and the syrup of the hypophosphites are often of great service. The condition of the emunctories should also be constantly attended to. Electricity, in the form of the galvanic current of mild intensity, used after the method of general galvanization daily is of service, and will by its alterative and tonic properties assist in modifying the pathological process.

EPITAPH.—On a gravestone in a country churchyard in England, on Mrs. Arabella Greenwood, who died in childbed; written by Rev. Mr. Greenwood, D.D.:

O Deathe! O Deathe! thou hast cutte down
The fairest GREENWOOD in all this towne;
Her virtues and good qualities were suche
That shee might have married a lorde or a judge;
But such was her condescensione, and such her humilitie,
She chose to take me, a Doctor of Divinitie,
For which heroicke acte, she stands confeste
Above all others the Phœnix of her sexe,
And like that birde one younge shee did begette,
That shee might not leave her sexe disconsolate.
Mie griefe for her is so verie sore
I can onlie write two lines more:
For this, and everie good woman her sake,
Never let a blisterre be putte on a lyinge-in-woman's backe.

—*Boston Weekly Magazine*, December 17, 1803.—*Boston Med. and Surg. Journal.*

TWIN-MONSTROSITY: ALLEGED MATERNAL IMPRESSION.—Mr. B. R. Johnston, M. R. C. S., relates the following case in the *British Medical Journal*: A. T., aged 42, married nineteen years, had ten children, the eldest eighteen years old. Menstruation ceased last March, and she expected her confinement about the middle of November, at which time she consulted a medical man, who told her that if she went much longer she would probably have twins, she replying that she did not care so long as they were not "Siamese." On January 22 she went to the Lying-in Hospital, and stated that she thought there was "something wrong with her," and that hæmorrhage had previously occured. On the 23d, having been sent for, I found she had been in labour since 10 P. M. on the previous night. On examination, the head was found pressing on the perinæum, and all pains had ceased. This being the case, I immediately applied the forceps, and delivered the head without difficulty; but it was not until after prolonged traction that the shoulders partially emerged, when I discovered that there was an outgrowth from the chest which prevented any further movement in that direction. I therefore passed my hand round the lower part of the abdomen, and delivered the breech and legs. The child was now entirely born, but finding it connected from the neck to umbilicus with another child still in the uterus, I laid hold of the legs of the second, and delivered it without difficulty. The placenta followed in a few minutes. There was only one cord, proceeding from a common umbilicus. The children, both born dead, were males. In the ordinary position they faced one another, but the connecting link was sufficiently lax to allow them to lie partially side by side. In every other respect they were perfectly formed, and weighed eleven pounds. The next day, when the mother heard of their condition, she told the nurse that, in March last, she went to see the "Two-headed Nightingale," and fainted at the sight. I regret to say that the occurrence so effected her that, three days afterwards, she committed suicide by jumping out of a window.

AMBULANCE WORK AND THE POLICE.—Lately about forty of the members of the Edinburgh police-force have had a course of ambulance instruction from Dr. Keith. Examinations have been held in the work gone over, and with the satisfactory result that an average result of 80 per cent. of marks was got; one policeman attained 96 per cent. available marks; the lowest obtained 65 per cent. The energetic Chief Constable intends taking steps for the purpose of procuring distinctive badges to be worn by the officers who have passed successfully; and next season he contemplates approaching the authorities with the view of securing ambulance-training for all the members of the force. This is a wise step, as the educated services of policemen in cases of accident would be invaluable in many cases, where, at present, from lack of proper training, although their good will may be abundant, the power of rendering efficient aid is deficient.—*British Med. Journal.*

SNUBBED.—The military ardor of Drs. Ranney, Post, and others, who offered their services to Russia as surgeons, in case of war with England, has received a chill, the following letter having been received by Col. McComas:

"WASHINGTON, May 4, 1885.

*D. H. McComas, Esq., Deputy Secretary of State, Lansing, Mich.*

SIR:—In reply to your letters of April 10 and April 21, 1885, in behalf of Drs. Ranney and Post, I beg to say that foreigners, physicians, and surgeons are allowed to exercise their profession in Russia only if they obtain in one of our academies of medicine the necessary diploma, delivered after successful examination before a Board of Professors. Diplomas of foreign institutions are not sufficient, and the lack of knowledge of the Russian language will, without doubt, create great difficulty. I understand that, considering the great number of our own Russian surgeons, there is not a special need of enforced help at present, and do not know of any intention of our Government to facilitate now to foreign doctors the exercise of their profession.

I remain, sir, very respectfully,

A. GREGER,

Secretary of Legation.—

*Detroit Free Press.*

HOT WEATHER AND CHOLERA.—Daniel Draper, Ph. D., of the Meteorological Observatory at Central Park, has appended to a recent report of weather statistics the weekly meteorological and mortality records of New York city for the "cholera year," 1854.

The scourge first appeared in the last days of May, and for the week ending June 3 12 deaths out of a mortality of 415 were attributed to cholera. The weather of the week had been delightful. The temperature averaged 64°, and at no time exceeded 77°, while five out of the seven days were fair. The epidemic spread so rapidly that for the last week in June its victims numbered 78, making a total number of deaths since its breaking out of 202. During the first week of July not a drop of rain fell. The temperature was exceedingly variable, ranging from 69° to 92°, with an average of 81°. The mortality for the week was greater than for any previous seven days of the year, reaching 761 deaths, 97 of which were the result of cholera. The third week in July was the hottest and driest week of the year, the temperature reaching a maximum of 94°, with not a drop of rain, and only two days when the sun was not shining in all his strength. The deaths for the seven days numbered, from cholera, 183, and from cholera infantum, 145. The mortality continued to increase until the first week in August, when it reached its height, with a death record of, cholera, 302; cholera infantum, 141. The decrease thereafter was slow, and for weeks the victims were numbered in the hundreds. The weather continued very warm through October, and even in November the temperature averaged as high as 4°. The last death from cholera occurred during the first week of December. An epidemic of scarlet fever followed for a few weeks, with an average death rate of 17 persons a week. The first four months of the cholera year there was a small-pox epidemic, during which 399 person died from its effects.

THE CHOLERA CONFERENCE AT BERLIN.—The recent conference upon cholera held at Berlin did not make any notable advance upon the position taken up by the same body of scientists at their gathering last summer. To be sure, much has happened since then, and a great deal more information has been obtained concerning the comma bacillus and its allies. Thus Professor Koch had in the first place to meet the numerous objections that have been raised during the past six months to his view that the comma bacillus is to be regarded as the actual cholera germ. The members of the conference now, as then, appear to have tacitly or openly coincided with Professor Koch's doctrine and all that flows from it. Indeed, had it not been for the presence of Professor von Pettenkofer there would have been little to debate about. Professor von Pettenkofer's difficulties in admitting the comma bacillus to be the cause of cholera rested on many grounds, but in the main upon the epidemiological data, especially those having reference to the influence of locality and season. Yet he seems to have admitted the dissemination of cholera by human intercourse, although he could not admit that the introduction of a case of cholera on board ship could be the starting point of an epidemic. Altogether the doctrines enunciated by Professors Koch and Virchow seem to have had more cogency and to have been more definite than those advanced by Professor Pettenkofer.—*Lancet.*

FAILURE OF HOMŒOPATHY AT ANN ARBOR.—The classes of the homœopathic students of the Ann Arbor Medical School have fallen from eighty-eight in 1880—81 to thirty-four in 1884—85. It is admitted that the school is in a bad way.—*New York Medical Record.*

A CHEMIST'S VALENTINE.

I love thee, Mary, and thou lovest me;
Our mutual flame is like the affinity
That doth exist between two simple bodies;
I am potassium to thy oxygen.
'Tis little that the holy marriage vow
Shall shortly make us one. That unity
Is, after all, but metaphysical.
Oh, would that I, my Mary, were an acid,
A living acid, thou an alkali,
Endowed with human sense, that, brought together,
We both might coalesce into one salt,
One homogeneous crystal * * *

I'd be content to be sulphuric acid,
So that thou might'st soda be. In that case
We'd be Glauber's salt. Wert thou magnesia
Instead, we'd form the salt that's named from Epsom.
Couldst thou potassa be, I aquafortis,
Our happy union should that compound form,
Nitrate of potash—otherwise saltpetre;
And thus, our several natures sweetly blent,
We'd live and love together until death
Should decompose this fleshly *tertium quid,*
Leaving our souls to all eternity
Amalgamated. Saint, thy name is Briggs
And mine is Johnson. Wherefore should not we
Agree to form a Johnsonate of Briggs?

*Mich. University Med Jour.*, quoted in Medical Rhymes.

## MEDICAL NEWS.

American Climatological Association.—The second annual session of the American Climatological Association was held at the Academy of Medicine in this city April 27 and 28. The President, Dr. Alfred L. Loomis, delivered the annual address, and among the papers read were the following: "Antiseptic Inhalations," by Dr. Beverley Robinson, New York; "Catarrhal Affections of the Nasal Cavities as a Cause of Pulmonary Phthisis," by Dr. W. C. Jarvis, New York; "The Home Treatment of Consumption," by Dr. F. C. Shattuck, Boston; "Further Consideration of Pneumatic Differentiation, with Demonstration of the Pneumatic Cabinet," by Dr. H. F. Williams, Brooklyn; "A Rule for the Even Division of Climate, Based upon the Average of the Combined Atmospheric Humidities in the United States," by Dr. Charles Dennison, Denver, Col.; "The Problem of Acclimatization," by Dr. J. H. Platt, Brooklyn; "Geographical Distribution of Phthisis in Michigan, with Sketch of Topography," by Dr. E. L. Shurley, Detroit; "Florida as a Health Resort," by Dr. J. C. Wilson, Philadelphia; "The Results of the Home Treatment of Consumption, Contrasted with those of Changed Residence and Climate," by Dr. E. D. Hudson, Jr., New York; "Hay Fever and Allied Affections," by Dr. F. H. Bosworth, New York. The following officers were elected for the ensuing year: President, Dr. Wm. Pepper, Philadelphia; First Vice-President, Dr. Frank Donaldson, Baltimore; Second Vice-President, Dr. Beverley Robinson, New York; Secretary and Treasurer, Dr. J. B. Walker, Philadelphia: Members of the Council: Drs. J. C. Wilson, Philadelphia, and F. H. Bosworth, New York.

Medical Association of Missouri.—The twenty-eighth annual meeting was held at St. Joseph, May 12, 13, and 14, with the President, Dr. H. H. Middlekamp, in the chair. The following officers were elected: President, Dr. G. C. Cattell, St. Joseph; Vice-President, Dr. C. A. Todd, St. Louis; Recording Secretaries, Drs. J. H. Thompson, Kansas City, and J. C. Mulhall, St. Louis; Corresponding Secretary, Dr. T. J. Lutz, St. Louis; Treasurer, Dr. C. A. Thompson, Jefferson City. St. Louis is to be the next place of meeting.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.—The eighty-seventh annual meeting was held at Baltimore May 12, 13, 14, 15, and 16, with the President, Dr. T. S. Latimer, in the chair. The following officers were elected: President, Dr. John R. Qunian; Vice-President, Drs. A. H. Bayly, and J. E. Michael; Secretary, Dr. G. L. Taneyhill; Assistant Secretary, Dr. R. T. Wilson; Reporting Secretary, Dr. R. H. Thomas; Treasurer, Dr. W. F. A. Kemp.

INDIANA STATE MEDICAL SOCIETY.—The thirty-fifth annual meeting was held May 12, 13, and 14, at Indianapolis, and the following officers were elected: President, Dr. J. S. Gregg; Vice-President, Dr. W. H. Hurst; Secretary, Dr. E. L. Elder; Assistant Secretary, Dr. W. H. Lopp; Treasurer, Dr. G. W. H. Kemper.

ILLINOIS STATE MEDICAL SOCIETY.—The thirty-fifth annual meeting was held at Springfield May 19, 20, and 21, and the following officers were elected: President, Dr. W. A. Byrd; Vice-Presidents, Drs. W. T. Kirk, and A. Wetmore; Permanent Secretary, Dr. S. J. Jones; Assistant Secretary, W. I. H. Luce; Treasurer, Dr. W. Hay. The next meeting will be held at Bloomington.

SOUTH CAROLINA MEDICAL ASSOCIATION.—The thirty-fifth annual meeting was held at Charleston April 21, with the President, Dr. A. A. Moore, in the chair. The following officers were elected: President, Dr. O. B. Mayer, Jr.; Vice-Presidents, Drs. T. J. McKie, H. D. Fraser, and T. Munroe; Recording Secretary, Dr. W. P. Porcher; Corresponding Secretary, Dr. J. L. Dawson, Jr.; Treasurer, Dr. H. W. de Saussure, Jr.

MISSISSIPPI STATE MEDICAL ASSOCIATION.—The eighteenth annual meeting was held at Greenville April 15 and 16, with the Vice-President, Dr. Gresham, in the chair. The following officers were elected: President, Dr. J. B. Gresham; 1st Vice-President, Dr. I. B. Peace; 2d Vice-President, Dr. S. R. Dunn; Recording Secretary, Dr. W. E. Todd; Assistant Recording Secretary, Dr. G. K. Harrington; Corresponding Secretary, Dr. M. S. Craft; Treasurer, Dr. J. F. Hunter.

PENNSYLVANIA STATE MEDICAL SOCIETY.—The annual meeting was held at Scranton May 27, 28, and 29. Papers on the epidemic of typhoid fever at Plymouth, in which the origin of the disease was distinctly tracked to pollution of the drinking-water, were read by Drs. Taylor, of Wilkesbarre, and French and Shakespeare, of Philadelphia. The annual address was delivered by the President, Dr. Allen, of Bradford County, and Dr. A. E. Wood was elected President for the ensuing year.

MEDICAL DEPARTMENT UNIVERSITY OF THE CITY OF NEW YORK.—

Dr. S. A. Stimson has been elected to the professorship of anatomy, the chair left vacant by the death of Dr. Darling.

DEATH OF PROF. PANEM.—Dr. P. A. Panem, the distinguished Professor of Physiology in the University of Copenhagen, who presided at the meeting of the International Medical Congress last summer, died May 3.

NEW YORK NECROLOGICAL SOCIETY.—The following officers were elected at the annual election: President, Dr. W. R. Birdsall; 1st Vice-President, Dr. L. Weber; 2d Vice-President, Dr. C. L Dana; Recording Secretary, Dr. G. W. Jacoby; Corresponding Secretary, Dr. W. M. Leszynskey; Treasurer, Dr. E. C. Harwood.

CHOLERA CONFERENCE AT BERLIN.—Another German cholera conference was held at Berlin, commencing May 4.

LUSK'S MICROSCOPY.—The last American edition of this work has been translated into French by Dr. Dolins, with a preface by Pajot.

COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.—The seventy-eighth annual commencement was held in Steinway Hall May 12, when degrees were conferred upon 134 graduates, and the Rev. C. H. Parkhurst, D. D., delivered the address to the class. The Cartwright prize of $500, open to universal competition, was awarded to Dr. William Russell, of Edinburgh, Scotland, for an essay on "The Heart in Debility." There were some other essays sent in. The 1st Harson prize of $500, for the best examination, was won by George Woolsey, a son of ex-President Woolsey, of Yale College, who also received an appointment to Bellevue Hospital.

NEW YORK POST GRADUATE SCHOOL.—At the third annual meeting of this institution, held May 5, Dr. D. B. St. John Roosa was re-elected President; Dr. F. R. Sturgis, Secretary; and Dr. W. O. None, Treasurer. Dr. Clinton Wagner and W. F. Fluhrer were elected members of the Executive Committee. The annual report of the secretary showed that 133 graduates in medicine had attended the lectures of the school during the year.

SMALL-POX IN MONTREAL.—The severe epidemic of small-pox which has been prevailing at Montreal has been traced to the young bride returning from her honeymoon who was stricken with the disease on her way from New York to Chicago, as related in the March number of the JOURNAL. On reaching Chicago some of the employees of the train were transferred to the Canada route, and through them the contagion was conveyed.

INOCULATION WITH YELLOW FEVER VIRUS.—The Mexican Government has permitted the garrison of Vera Cruz to be inoculated with yellow fever virus, in accordance with Prof. Carmona's method, experiments having first been made on prisoners who volunteered for the purpose. Distinct symptoms of the disease are said to be produced by the inoculation, and the practical results of the procedure will be watched with much interest.

TYPHUS FEVER IN NEW YORK.—A number of cases of typhus have been reported in this city of late, six of them being found in some tenements on Mott street, not far from the Health Department offices.

GLANDERS IN CANADA.—Glanders is said to be prevailing to a large extent in Montreal and the vicinity, and one man has died in the hospitals of the disease, which he contracted from a horse.

THE NEW YORK SKIN AND CANCER HOSPITAL.—According to the second annual report, one hundred patients have been treated and fifty-five operations performed in the cancer department of this institution.

THE BROOKLYN BRIDGE TRAGEDY.—At the autopsy on the body of the man Odlum, who lost his life in jumping from the Brooklyn bridge into the East River, by striking the water with his side, it was found that the five lower ribs on the left side were fractured diagonally, and that the lungs, kidneys, spleen, and liver were ruptured. Since then a number of others have attempted to make the leap, some with suicidal intent, but have all been prevented by the police. In 1882 an intoxicated man jumped from High Bridge, the aqueduct over the Harlem, an even greater height, and survived. In his descent he turned two somersaults, but was fortunate enough to strike the water feet foremost.

NEW YORK STATE BOARD OF HEALTH.—The annual meeting of the board was held in this city May 15, when Dr. E. M. Moore was re-elected president, and Dr. Alfred S. Carroll secretary.

THE CARNEGIE LABORATORY.—This new building, devoted to histological and pathological investigation, was thrown open for the first time on the evening of May 14, when the profession was given the opportunity of inspecting its admirable appointments. The imported culture apparatus, various forms of bacilli, and a number of interesting pathological specimens, were also exhibited by Professors Janeway and Dennis and their assistants.

NEW YORK COUNTY MEDICAL ASSOCIATION.—The May meeting of this society was held in the lecture-hall of the Carnegie Laboratory on the 18. Dr. E. G. Janeway delivered an address on the recent advances in the study of the etiology of disease, which will be published in the *Journal* hereafter, and Dr. A. Flint, Jr., read a paper on a comparison of some of the methods for determining the proportion of urea in the urine. Dr. H. M. Biggs, one of the instructors in the Carnegie Laboratory, who has recently returned from a course of study in Germany, gave a demonstration of the theme comma bacilli, the mouth bacillus of Lewis, the Finkler and Prior bacillus of cholera morbus, and the Koch bacillus of Asiatic cholera.

THE PLYMOUTH EPIDEMIC.—May 26 Drs. James B. Taylor and Cyrus Edson, of the New York Health Department, sent in their report of the investigation which they have made of the outbreak of typhoid fever at Plymouth, Pa., the report being accompanied by maps, photographs, and tables of analyses of water made by Inspector E. W. Martin and Prof. E. Waller. The evidence is conclusive as to the origin of the disease from the contamination of the drinking water in the first instance by the discharges of a single typhoid fever patient.

DIPHTHERIA AT PARIS ROADS, PA.—Dr. Biggs, of the Carnegie Laboratory, has been making an investigation of the very fatal outbreak of diphtheria at this place, which, from the reports received before his arrival on the ground, he had been led to believe was an epidemic of the malignant type of erysipelas sometimes known as "black-tongue."

CHARITY HOSPITAL, BLACKWELL'S ISLAND.—Dr. Alexander B. Mott has been appointed consulting surgeon to this institution.

THE ADIRONDACK FORESTS TO BE PROTECTED.—The bill providing for a forestry commission and the protection of the Adirondack woods has become a law.

THE ILLINOIS STATE BOARD OF HEALTH AND MEDICAL EDUCATION.—The Illinois Board of Health has unanimously adopted a resolution to the effect that, in order to secure the recognition of its diplomas as in good standing for the purposes of the Medical Practice Act in this State, it is necessary that each college shall distinctly state in its annual announcement that the conditions of admission to its classes are: 1. Creditable certificates of good moral character. 2. Diploma of graduation from a good literary and scientific college or high school, or a first-grade teacher's certificate; or, lacking this, a thorough examination in the branches of a good English education, including mathematics, English composition, and elementary physics or natural philosophy.

MEDICAL DEPARTMENT YALE COLLEGE.—Dr. Herbert E. Smith, of New Haven, has been appointed Professor Silliman's successor in the chair of chemistry at this school.

DEATH OF PROF. HENLE.—Dr. Frederic Gustave Charles Henle, the eminent physiologist and anatomist, died in Berlin May 18. He was born in Bavaria in 1809, and studied medicine at Heidelberg and Bonn. He subsequently held professorships at Berlin, Zurich, Heidelberg, and Gottingen, and his published works have made him widely known.

MEDICAL FOUNDERS.—On May 28 a new club-house for members of the Delta Kappa Episilon Fraternity was opened in this city with appropriate festivities, and among those present were two of the five surviving founders of the Fraternity, Dr. E. G. Bartlett, of New York, in whose room at Yale College the Fraternity was started in 1844, and Dr. E. B. Shapleigh, of Philadelphia.

BEQUESTS TO HOSPITALS.—St. Luke's Hospital, in this city, has been left $5,000 by the Rev. David H. Macready, and the Brooklyn Hospital the same sum by Mr. Peter C. Cornell. The late Mrs. Mary Wagner, widow of the brother of the founder of the Wagner Free Institute in Philadelphia, bequeathed $1,000 to the Pennsylvania Hospital, $2,000 to Christ Church Hospital, and $1,000 to the Protestant Episcopal Hospital of Philadelphia. The latter institution, in accordance with her husband's will, also receives $10,000at her death.

THE LATE EDITOR OF THE JOURNAL.—At the twenty-eighth annual meeting of the Southwestern Kentucky Medical Association, held in Paducah May 12, 1885, the following resolution, offered by Dr. John L. Dismukes, of Mayfield, was unanimously adopted. B. F. O'Daniel, M.D., Secretary. "At this, the first meeting of the Southwestern Kentucky Medical Association since the death of our lamented friend and brother of the profession of medicine, we, in our assembled capacity as a society, hereby express our regret at the death of E. S. Gaillard, M.D., and our great sympathy for his bereaved family. Though his many virtues and great intellect have gone to the silent grave, he has left a name and a memory which we would not let sleep or be forgotten, and as an expression of our great concern for his loved ones we call the attention of the medical profession at large to the fact that his journal of medicine, which he made one of the best in the United States, is now published by his wife and son, under the especial direction of the best medical minds in the country. Furthermore, as an expression of our regard for the dead, the request is urged that the profession should cordially support GAILLARD'S MEDICAL JOURNAL by prompt subscription to the same, thereby offering substantial aid to the living."

## EDITORIALS.

THE INTERNATIONAL MEDICAL CONGRESS AND THE AMERICAN MEDICAL ASSOCIATION.—This journal has thought it judicious to abstain from discussion of the relations of the American Medical Association to the meeting of the International Medical Congress, which is to take place at Washington, in 1887, until the actual facts with regard to the recent action of the meeting of the Association at New Orleans had been given to the profession in the official minutes of the proceedings. It appears, however, that the accounts of the meeting at New Orleans, given by the weekly medical journals, were correct, their reports being even fuller than the official records. There being differences of opinion concerning the powers delegated to the Committee of Invitation appointed at the meeting of the American Medical Association at Washington, in 1884, a careful scrutiny of the original resolutions under which this committee took action becomes necessary. The text of these resolutions is as follows:

"*Resolved,* That a committee of seven, of which Dr. Austin Flint, the President of this Association, shall be a member, shall be appointed by the President.

"*Resolved,* It shall be the duty of this Committee to extend, in behalf of the medical profession of the United States to the International Medical Congress about to meet at Copenhagen, a cordial invitation to have the next International Medical Congress meet at Washington, D. C., in 1887.

"*Resolved,* That the Committee shall elect its own officers, and that, in case the invitation is accepted, it shall proceed to act as an Executive Committee, with full power to fix the time and to make all necessary and suitable arrangements for the meeting of such Congress, and to solicit funds for this purpose.

"*Resolved,* That the Committee shall have power to add to its membership, to perfect its organization, and that to meet the preliminary expenses of printing, postage, etc., the Chairman of this Committee is authorized to draw upon the Treasurer of this Association for an amount not exceeding four hundred dollars."

In accordance with these resolutions, the original committee, Dr. H. F. Campbell, of Georgia, President-elect of the Association, having been added, was constituted as follows: Dr. Austin Flint, of New York, Chairman; Dr. J. S. Billings, U. S. Army, Secretary; Dr. J. M. Browne, U. S. Navy; Dr. H. F. Campbell, of Georgia; Dr. G. J. Englemann, of Missouri; Dr. I. Minis Hays, of Pennsylvania; Dr. C. Johnston, of Maryland; Dr. Lewis A. Sayre, of New York.

In accordance with the resolution, "It shall be the duty of this Committee to extend, in behalf of the medical profession of the United States, to the International Medical Congress about to meet at Copenhagen, a cordial invitation to have the next International Medical Congress meet at Washington, D. C., in 1887," the invitation was duly presented at Copenhagen and was accepted by the Congress.

In accordance with the resolution, "That the Committee shall elect its own officers, and that, in case the invitation is accepted, it shall proceed to act as an Executive Committee, with full power to fix the time, and to make all necessary and suitable arrangements for the meeting of such Congress, and to solicit funds for this purpose," the committee did elect its own officers, did proceed to act as an executive committee, fixed September, 1887, as the time of meeting of the Congress, made certain progress regarding "necessary and suitable arrangements for the meeting," and took preliminary steps toward soliciting funds for this purpose.

In accordance with the resolution, "That the Committee shall have power to add to its membership, to perfect its organization, and that to meet the preliminary expenses of printing, postage, etc., the Chairman of this Committee is authorized to draw upon the Treasurer of this Association for an amount not exceeding four hundred dollars," the committee added to its membership, perfected its organization, and drew the sum of four hundred dollars from the Treasurer of the American Medical Association.

Presumably, the secretary of the committee was clothed by the American Medical Association with all the powers which he regarded as essential to the efficient working of the committee, as it is understood that he is the author of the resolutions under which the committee was constituted.

In addition to the work distinctly specified in the resolutions, the original committee, enlarged and its organization perfected in accordance with the resolutions, proceeded to formulate rules to govern the meeting of the Congress, to divide the Congress into nineteen sections, and to nominate a list of officers for the Congress and for the sections, these nominations presumably being for presentation to and confirmation by the Congress itself at the opening of its meeting.

At the meeting of the American Medical Association held at New Orleans, in April of this year, the report of the original committee was not accepted on its presentation by its secretary, and a time was fixed for its discussion. In the course of the discussion which followed, it was said that the original committee had exceeded its powers in nominating officers for the Congress and its sections, and that certain persons had been so nominated who were not in good standing in the American Medical Association, by reason of their public repudiation of its Code of Ethics.

After an extended discussion upon the question of the acceptance of the report of the committee, the final action of the Association took the form of the following resolution, which was adopted with an amendment "that the members of the committee should be selected by the respective State delegations:"

"*Resolved,* That the committee appointed by this Association to arrange for the meeting of the International Medical Congress in America, in 1887, be enlarged by the addition of thirty-eight members, one from each State and Territory, the army, navy, and marine hospital service, to be appointed by the chairman at this meeting, and that the committee thus enlarged shall proceed at once to review, alter, and amend the motions of the present committee as it may deem best."

While the committee, as enlarged, was not actually instructed by resolution with regard to the organization of the Congress, it was understood by the Association and by the author of the resolution which was finally adopted, "that the enlarged Committee should take into consideration what had been said in the discussion, and that it should place no man in any position who is in direct opposition to the Code of Ethics of the American Medical Association." (*Medical News*, May 2, 1885.)

In discussing a matter so important as the reception of the International Medical Congress by the profession of the United States, it is desirable and essential to repress, as far as possible, acrimonious controversy and such feeling as seems to have inspired the editorial comments of certain medical journals.

The *Medical Record*, for example, says: "The recent action taken by the American Medical Association is, therefore, no more effective than would be a pope's bull against a comet, and was an untimely and over-zealous effort to undo what had been placed in charge of a committee previously elected to discharge, without restriction, a special duty."

The comments by the editor of the *New York Medical Journal* are even more violent: "We do not impute sinister motives to the meeting as a whole, for the facility with which an assemblage may be swayed by designing and crafty men is proverbial, and the American Medical Association has repeatedly shown its pre-eminent alacrity at being led by the nose. Especially is this excuse to be entertained in behalf of the association when we remember that the red rag of the new code was craftily flaunted in the members' faces. How little sincerity there was in that move may be inferred from the total lack of support given to a motion to acquiesce in the committee's work, provided the new-code men were dropped from the list of officers of the Congress, and the fact that the motion was promptly voted down. Nor do we attach much more importance to all the gas that was let loose about the West and the South having been ignored. It was not that the malcontents cared a fig to oust any man on account of his ethical proclivities or the place of his residence. They simply wanted the 'ins' to be made 'outs,' in order that they themselves might become 'ins.' To accomplish this purpose, they naturally seized hold of the most promising pretexts, and the event proved the depth of their cunning. To stir up such a dissension under the most galling provocation would have been bad enough, in view of the disgust it can not fail to create in Europe; but on such a transparent foundation of greed for place—bah!"

In view, however, of the existing difficulties, which may interfere seriously with harmony of action and the success of the Congress, it is proper to carefully inquire into the probable causes of the present trouble, the propriety of the action of the original committee and of the American Medical Association, and the possibility of a happy termination of the antagonisms that have so unfortunately arisen.

In dealing with the causes of the intense dissatisfaction of the American Medical Association with the action of its committee, we shall allude only to what are universally recognized as facts. That the committee, in adding to its number, had certain delicate points to determine, is sufficiently evident. The geographical question was, in itself, of great importance; but, in the organization of a general committee, it is evident that this body should be composed mainly of those whose attendance at meetings could be easily secured and who resided near the place of meeting of the Congress. In the selection of additional members, however, there should have been no ground for an impression that one or more of the original committee desired to carry out a personal programme, without full discussion and respectful consideration of the views of all of its members. Peculiar difficulties existed as regards the additional appointments from the State of New York, depending upon the attitude of certain members of the profession in direct and active conflict with the American Medical Association. As regards these, the Association presumably relied mainly upon the two original members from New York, to whom the question might well have been left by the committee. It is pretty generally understood, however, that certain members of the committee presented, through the secretary, a list of persons at the first meeting of the committee held in the city of New York, one of whom at least, would, in the opinion of the New York representatives, have been a conspicuously unsuitable nomination; that this was done without consultation with the two members of the committee from New York, one of whom was ill at the time of the meeting, and that this and other names were persistently urged. If any combination were made within the committee, to the exclusion of the representatives from New York, for the purpose of forcing the appointment of one or more persons, this was indecorous and indicative of a spirit that would, sooner or later, seriously interfere with harmonious action.

The geographical question became of even greater importance in connection with the selection of the great number of officers and members of councils of the sections. It is understood that members of the general committee from a distance found nominations pretty generally determined upon when they attended the meeting at Washington, and that their views with regard to these nominations received but little consideration. If this prevalent impression have any foundation in fact, it partly explains the dissatisfaction which found such vigorous expression at New Orleans. The so-called code-question seems to have been settled in a perfectly definite way. Of the nominations from the State of New York, the numbers of those who had publicly announced their adhesion to the Code of Ethics of the American Medical Association, and of those who had as publicly repudiated the code or had subscribed to the "New Code," which removes restrictions against consultations with, and professional recognition of, irregular practitioners, were about equal. The nearly exact partition of these offices, it would seem, could hardly be a coincidence; particularly as most of the nominations were not made in an actual session of the general committee, but were sent to individual members for their consideration and approval. This mode of action was certainly irregular, and it is expressly forbidden by parliamentary rules. It is laid down in Cushing's "Manual," that a committee "can only act when regularly assembled together as a committee, and not by separate consultation and consent of the members." It is but just and fair to assume, however, that the original committee acted in good faith, and in what they believed to be the best interests of the Congress, and we have no desire to attribute to them any other motives; but if it shall appear that the secretary, or any combination within the committee, assumed the responsibility of the entire organization of the Congress, the dissatisfaction with its action is readily explained. That serious dissatisfaction exists, is but too apparent.

The question as to whether or not the original committee exceeded the authority given to it by the American Medical Association is a fair subject for a discussion which need not be offensive or discourteous, and which does not necessarily imply an imputation of motives of action.

It was resolved by the American Medical Association "that the Committee shall elect its own officers," * * * "shall proceed to act as an Executive Committee, with full power to fix the time and to make all necessary and suitable arrangements for the meeting of such Congress, * * * and "that the Committee shall have power to add to its membership, and to perfect its organization."

There can be but one meaning attached to the wording of the resolutions. The committee was given the power to elect its (the committee's) own officers; the committee was given power to make arrangements for the meeting of the Congress; it also had power to add to its membership and to perfect its (the committee's) organization. While the committee had power to make arrangements for the meeting of the Congress, it was not specified that these arrangements involved a nomination of officers for the Congress. The only officers which the committee had power to elect were "its own officers;" the only new appointments which the committee had power to make were those to "add to its membership;" and the organization which it was empowered to perfect was "its organization," meaning the organization of the committee. In nominating some two hundred and eighty-five officers and members of councils, and in publishing these nominations here and abroad, in English and in foreign languages, the committee did undoubtedly, though probably with the best intentions, greatly exceed its powers. The creation and filling of nearly three hundred offices could not have been contemplated by the American Medical Association when it gave to a small committee power "to make all necessary and suitable arrangements for the meeting of the Congress," however the question of power may have been understood by the framer of the resolution.

According to the instructions embodied in the resolutions of the American Medical Association, the committee extended the invitation to the Congress "in behalf of the profession of the United States." Such an invitation could have been extended only by a body representing the "profession of the United States." In the absence of a special convention of the profession of the United States, the only organized body representing the profession is the American Medical Association. This body is essentially the representative of the entire profession, as it is not a body of specialists, is composed of permanent members who have served as delegates, and of delegates from all the regular medical societies of the United States, and is divided into sections representing the different departments in the science of medicine, as is the International Medical Congress. If any organized body have the right to extend an invitation in behalf of the medical profession of the United States, that body is the American Medical Association; and the Association exercised this right in sending a committee to invite the International Medical Congress to meet in Washington in 1887. When an organized faction in the profession has publicly repudiated the principles which lie at the foundation of the American Medical Association, and has been refused recognition by the Association, that faction, collectively and individually, has virtually separated itself from the regular medical profession of the United States. Such a faction, which exists in the State of New York, is now made to appreciate its anomalous attitude toward the regular profession, when it is understood that a committee appointed to organize the next International Medical Congress shall "place no man in any position who is in direct opposition to the Code of Ethics of the American Medical Association." Certain of the leaders of this faction, it is said, have intimated that they would withdraw their opposition to the code of the Association, in case certain explanatory resolutions should be adopted. Such resolutions have been adopted; and it remains to be seen whether or not the opponents of the code wish to be recognized as in sympathy and affiliation with the regular profession.

It has been denied that the American Medical Association has a right to review or to reject the report of its committee, for the reason that the committee was entrusted with certain powers, and that the resolutions under which the committee was constituted did not specifically call for a report. It is difficult to imagine that such an opinion can be seriously entertained. In parliamentary practice, whether expressed or not in the constitution of a committee, a committee is always required to report to the body by which it has been appointed.

"The final question on a report, whatever form it may have, is usually stated on its acceptance; and, when accepted, the whole report is adopted by the assembly, and becomes the statement, reasoning, opinion, resolution, or other act, as the case may be, of the assembly; the doings of a committee, when agreed to, adopted, or accepted, becoming the acts of the assembly, in the same manner as if done originally by the assembly itself, without the intervention of a committee."—(Cushing's "Manual.")

When a committee is appointed with power to do certain things which go into effect and are completed before the time of another meeting of the assembly, its acts, having been completed, cannot, of course, be recalled, and the committee is liable only to censure in case its action has been unsatisfactory; but the action of a committee may always be reviewed by the assembly, and it does not become the action of the assembly until it has been formally adopted. In the case in question, the committee, in the opinion of the Association, exceeded its powers, and its action was unsatisfactory. The Association proceeded to enlarge its committee and recommitted a part of the original subject matter to the enlarged committee, all of which was entirely in accordance with parliamentary usage.

The last question for discussion is by far the most important: What can be done to bring about a happy termination of existing complications, and to ensure the success of the Congress in 1887?

In considering this question, the existing conditions must first be thoroughly appreciated:

All the acts of the original committee, except the presentation of the invitation to the Congress, which has been accepted, are null and void.

The existing committee is now composed of the original seven, the president of the American Medical Association for 1885, with the additions that were made at the last meeting of the Association, to the number of about forty.

This enlarged committee has before it the work of organizing the International Medical Congress of 1887, the committee being, by special resolution, "authorized and empowered to select a chairman and a secretary, and to fill all vacancies that may occur by death or inability to attend the committee meetings, and to appoint the officers of the Congress."

It was undoubtedly the sense of the meeting at New Orleans that the committee "should place no man in any position who is in direct opposition to the Code of Ethics of the American Medical Association."

The duty of the eight members of the original committee, under the circumstances as they at present exist, seems to be perfectly plain. Meetings of this committee of eight, held for the purpose of taking concerted action, are unnecessary and can do no good, for the reason that its members constitute a very small minority of the committee as it now stands, and there has already been too much concentration of responsibility. It would be worse than useless for the committee as first enlarged to take any formal action, for the reason that this enlarged committee now has no existence. The invitation has been officially extended to the Congress, and has been formally accepted. This invitation cannot be recalled except by the American Medical Association, which has shown no disposition to take an action which would be so discourteous to the Congress and so discreditable to the profession of the United States. If, however, the original members of the committee will put aside all personal considerations and all irritation at the recent action of the Association, and will co-operate heartily with their associates appointed at New Orleans, it is hardly possible to doubt that the final organization of the Congress will be successful and satisfactory. Recent experience has shown that one man, whatever may be his ability and enthusiasm, cannot successfully organize a meeting of the International Medical Congress in the United States. It will not now be difficult to follow the instructions under which the committee must act, as these instructions are sufficiently definite and positive. It must be remembered, also, that professional culture, attainment, and distinction are not confined to the cities of New York and Philadelphia; and that there is no one person who alone possesses the qualities necessary to a proper, judicious, and energetic execution of the details of the management of the coming Congress.

As to the absence of representatives of the "new code," the movement against the code of the Association is confined to the State of New York to a great extent, indeed, to the city of New York; and, notwithstanding the divisions of the profession in the State, there still remain a number of representative men in good standing sufficiently large to creditably and honorably fill the offices to which the State can properly lay claim. As time goes on, calm counsels will probably prevail. Some of those who have honestly adopted the "new code" may take steps to regain their honorable standing in the profession, now that certain disputed points in the code of the Association have been officially defined and explained. The greatest part of the really good work that has been already done by the members of the original committee, and those whom they associated with them, will probably be retained; and there is no good reason why the workings of the existing committee should not be entirely harmonious, particularly now that the so-called code-question has been practically eliminated. If merely local and personal prejudices be abandoned, and if all members of the committee contribute their best efforts toward the success of the Congress, a happy termination of all complications will be assured.

It need not be difficult to promptly effect a satisfactory and harmonious preliminary organization of the Congress. In that event, particularly if the regular meeting of the American Medical Association for 1887 should be devoted exclusively to necessary business, the scientific work being adjourned to the time of meeting of the Congress, the Congress will be exceptionally large and brilliant, and it is not easy to over-estimate the good that it will accomplish in bringing the profession of the United States into closer scientific and personal relations with their professional brethren abroad.

The Second Scientific meeting of the Fifth District Branch of the New York State Medical Association was held at Poughkeepsie, May 19, and like the meeting in Brooklyn in February was very successful. The first paper read was by Dr. Joseph D. Bryant, Surgeon General of the State, on three cases of ligation of the external carotid, in two of which both vessels were tied simultaneously, and was a most valuable contribution to American surgical literature. The conclusions arrived at by Professor Bryant were as follows:

First.—That ligation of the external carotid artery, together with independent ligation of its branches arising from the first inch of its trunk, is a safe and commendable operation.

Second.—That when the facial and lingual arteries do not arise, singly or by a common trunk, from the first inch of its course, the branches arising at the bifurcation should be tied.

Third.—That a simultaneous ligation of both the external carotids is a rational preparatory measure to operations involving the parts supplied by their branches, when dangerous hemorrhage is feared,

Fourth.—That simultaneous ligation is advisable to diminish the rapidity of the development of extensive malignant growths when nourished by the branches of the external carotid.

Fifth.—That the ligation of one or both external carotids for the cure of aneurismal formation of the branches of the same is not warranted as an independent measure.

Sixth.—That ligation of the common carotid should not be done for the cure or for the arrest of morbid conditions involving the external carotid or its branches, except as a final resort.

Interesting papers were also read by Dr. J. G. Porteous, S. J. Murray, R. C. Van Wyck, and C. S. Wood. Of these, Dr. Wood's appears in this issue of the Journal, and two of the others will be published in it at an early date.

Consolation for the Suffering.—While perusing the contents of "Wormley's Micro-Chemistry of Poisons," preparatory to writing the notice of the work which appears among the reviews in the present number, the editor was struck with the statement, given on the authority of M. Cutmann, that human blood is more rapidly digested by bugs than by mosquitoes, since it is not detected in the former after twelve hours, while in the latter it may be found even later than twenty-four hours after the ingestion of blood. It was with profound, though perhaps unchristian, satisfaction that he learned of this difficulty which the wicked mosquito has in assimilating the ill-gotten proceeds of his predatory assaults upon poor, defenceless humanity, and reflected that when one of these exasperating creatures, after his unhallowed feast, is apparently reposing upon the wall in that serenely comfortable frame of mind which is sometimes experienced by his victims when enjoying a good cigar after a well-cooked dinner, he is in reality suffering the agonies of some frightful nightmare induced by the pangs of acute indigestion.

Mr. Bergh on Posterity.—At a public meeting held a short time ago in opposition to a proposed new system of parks for the City of New York, Mr. Henry Bergh made some remarks, in the course of which he expressed himself as follows: "All of a sudden it occurred to somebody that the citizens of New York had done nothing for posterity. It was suggested that a park be bought for posterity, and several thousand acres of land lying between this city and Albany was picked out for it." Having referred to the probable cost of the project, he went on to say: "Why should we spend this great amount of money for posterity? What has posterity ever done for us? Did posterity help to give us our present advantages? No, indeed. I have never been brought face to face with posterity, but I despise it, and I do not want to be compelled to deny myself or my generation ordinary comforts merely that I may provide a place for posterity to run in, to ride in, and to shoot marbles in."

Truly this is a commendable spirit. With such a feeling toward posterity, the more syphilis, scrofulosis, and cancer that can be bequeathed to it, the better!

DR. EDWARD WARREN (BEY).—Dr. Warren sailed for Europe on Saturday, May 30, after a visit to this country which afforded much pleasure to his many friends here, who hope that in the future the intervals between his visits may be shorter than they have been. Our readers will, no doubt, be much gratified to learn that upon his return to Paris Dr. Warren will again resume the series of interesting letters which were interrupted by his trip to America. Dr. Warren's book has been delayed by the failure of the Osgood Publishing House. It will be ready for distribution very soon now, however, and orders for it can be sent either to the publishers of this JOURNAL or to Dr. T. G. Boyken, 11 North Liberty Street, Baltimore.

HEROIC GIRLS.—In a recent number of the *Lancet* appeared the following excellent remarks: "*A Heroic Girl.*—At an inquest held at St. Thomas's Hospital on the body of Elizabeth Chandler, aged three years, who died from burns received at the fire which lately occurred in the Borough, the jury returned a verdict of 'Accidental death,' adding that the conduct of the unfortunate young woman, Alice Ayres, who was instrumental in saving the lives of two other young children, and who herself had fallen a victim to the disaster, was beyond all praise. So far the jury have expressed the opinion of every one who read the sad story of this brave girl's presence of mind and dreadful death. But we would go a little further, and urge that such conduct is not beyond recognition. Why should not the name of a heroine be kept in memory? and what more appropriate way, in the case of one who saved little children's lives, only to lose her own, than by the establishment of a ward for children, or at least a cot, in one of the hospitals, which should bear the name of 'Alice Ayres?'"

Just about the time that the issue of the *Lancet* containing this account arrived in this country a despatch was received here from Huntingdon, Pennsylvania, relating the following: A valuable tract of timber land in Fulton County caught fire from burning brush, and William Hess, a farmer, fought the flames single-handed for several hours. Becoming exhausted, Mr. Hess fell to the ground unconscious. Two of his daughters, Annie and Lizzie, became alarmed at his absence, and in searching for him found him lying where he had fallen, only a few feet from the flames, which were then approaching at a fearful rate of speed. Hastily picking up the prostrate and unconscious form of their father, they hurried to a place of safety, but in doing so their own clothing became ignited, and before the flames could be extinguished they were so terribly burned that their recovery is doubtful. Surely the memory of these brave girls also is deserving of the grateful recognition of posterity.

A Brilliant Number.—In the July issue of the Journal the following original articles will appear: "On the Treatment of Urethral Stricture by Combining Internal and External Urethrotomy," by Reginald Harrison, F. R. C. S., Surgeon to the Liverpool Royal Infirmary, Lecturer on Clinical Surgery in Victoria University, England, Fellow of the Royal Medical and Chirurigical Society, London, etc., a paper to be read at the Lancashire and Cheshire Branch of the British Medical Association," June 24; "Some Points in the Surgery of the Hypertrophied Prostate," by Dr. J. W. S. Gouley, of New York; a paper read before the American Surgical Association, "The Causative Relation of Gonorrhœa to Renal and Cardiac Affections," by Dr. W. B. Hazard, of St. Louis; "The Routine Use of the Vaginal Douche After Normal Childbirth," by Dr. Simon Baruch, of New York; and "Diphtheria and Its Treatment by Calomel," by Dr. S. J. Murray, of Brooklyn, a paper read before the Fifth District Branch of the New York State Medical Association.

Notice.—The editor wishes it to be distinctly understood that he does not hold himself personally responsible for the opinions expressed in any articles published in the Journal, with the exception of those which appear in the editorial department, or those which are expressly endorsed by editorial comment in other departments.

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